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ABSTRACT

A 2-YEAR INVESTIGATION ATTEMPTED TO ASCERTAIN WHETHER SUMMER WORKSHOP TRAINING OF ELEMENTARY TEACHERS IN THE USE OF SUCH FEEDBACK PRACTICES AS FLANDERS' INTERACTION ANALYSIS, VIDEO TAPE TECHNIQUES, AND OTHER CONCEPTUAL SUPERVISORY TOOLS WOULD PRODUCE MEASURABLE CHANGE IN THE INSTRUCTIONAL BEHAVIOR OF THEIR STUDENT TEACHERS AS COMPARED TO STUDENT TEACHERS WORKING WITH NONWORKSHOP TRAINED TEACHERS. PRE- AND POSTTESTS INCLUDED THE TEACHING SITUATION REACTION TEST (TSRT); A SEMANTIC DIFFERENTIAL ON CONCEPTS OF ASPECTS OF TEACHING; AND TWO ADMINISTRATIONS (REAL AND IDEAL) OF THE MINNESOTA STUDENT ATTITUDE INVENTORY (MSAI). A TEAM OF TRAINED OBSERVERS OBSERVED EACH STUDENT TEACHER SIX TIMES DURING THE SEMESTER USING HOUGH'S 23- OR 32-CATEGORY OBSERVATION SYSTEM FOR INSTRUCTIONAL ANALYSIS (OSIA). RESULTS SHOWED AN INCREASE OF CONGRUENCE BETWEEN STATED INTENT AND INSTRUCTIONAL PERFORMANCE OVER THE PERIOD OF STUDENT TEACHING. ALTHOUGH THE DATA WERE MORE SUGGESTIVE THAN CONCLUSIVE, THERE WAS SLIGHT EVIDENCE THAT FOR DEFINABLE SUBGROUPS OF STUDENT TEACHERS, PARTICULAR SUPERVISORY ACTIVITIES WERE RELATED TO THE POSITIVE CHANGES. (IMPLICATIONS ARE DISCUSSED, PARTICULARLY WITH REGARD TO THE USE OF THE INSTRUMENTS, AND RECOMMENDATIONS MADE ABOUT TRAINING DESIGNS AND FURTHER RESEARCH IN THE AREA. (ALSO INCLUDED ARE BEHAVIORAL OBJECTIVES AND ACTIVITY DESCRIPTIONS FOR THE WORKSHOPS, COPIES OF THE INSTRUMENTS USED, AND A 28-ITEM BIBLIOGRAPHY.) (JS)

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IMPLEMENTING AGENCY

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July 1969

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THOMAS E. CLAYTON
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INTRODUCTION

Preface

This report describes a two-year investigation of the influence on student teachers of a training program for cooperating teachers. Certain characteristics of both student teachers and cooperating teachers were studied to assess relationships between and among such characteristics and the major variables: training, and the classroom instructional behaviors of student teachers.

Two discrete but related projects provide the data for this report. The first, A Pilot Study (Preparing beginning teachers for working with the educationally disadvantaged: A pilot study of the influence on student teachers of a training program for cooperating teachers in inner-city schools) covered a contract period of July 1, 1967 through June 30, 1968.

The second project, A Continuing Study (see full title on Title Page of report) covers a contract period from July 1, 1968 through July 31, 1969.

The description and findings of both studies are presented here as an integrated report. It follows the format suggested by the Division of Research, but is intended as a final report to the Bureau of Inservice Education, the Syracuse City School District and the Division of Research.

Since the projects involve both a training design and a research design, both will be detailed, but the greater emphasis will be on the research phase and its findings.

Statement of the problem

The problem was initially stated in the proposal for support of the pilot study:

> Student teaching has long been recognized as being one of the most critical components in programs for the preparation of teachers. Typically, the student teaching experience is the terminal experience in teacher training programs. In the five year urban teacher preparation program at Syracuse University this will not be the case.(1) In this program, student teaching is seen as one of several experiences which are designed to prepare the beginning urban teachers for an intensive internship during their fifth

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(1) See "Urban Teacher Preparation Program: Proposal for a New Five Year Program in Urban Teaching," Syracuse University, 1967 (mimeographed).

year in inner-city schools, In the five year urban teacher training program at Syracuse University the student teaching experience will become the place where these beginning teachers first learn to apply the basic skills of teaching in classrooms that contain a substantial number of educationally disadvantaged students. It is here where they will learn to control and apply teaching behaviors which are both effective and congruent with their unique potentials as beginning teachers, and are appropriate for the students they are teaching. Traditionally, the cooperating teacher has been a key figure in the student teaching experience. This will be particularly true in the student teaching experience of the five year urban teacher preparation program. The quality of the supervisory relationship with these student teachers will play a critical role in creating the conditions under which these student teachers will begin to develop an effective and natural teaching style that will be refined later in their internship. It would seem, therefore, that a well trained corps of effective cooperating teachers would be necessary for the success of this initial clinical teaching experience in the urban teacher preparation program.

Effective teaching and effective supervision require different skills. Our experience suggests that supervising teachers, though successful and perhaps outstanding in the classroom, typically (a) lack skill in giving useful feedback to student teachers concerning their instructional behavior, (b) lack the kind of conceptual understanding of the teaching-learning process necessary to help student teachers develop generalizations from exemplars of concepts, (c) tend to shape the student teachers' instructional behavior in their (the cooperating teachers') own mold.

What is needed is a corps of cooperating teachers who can help student teachers develop effective teaching patterns that are congruent with their own unique potentials as beginning teachers and their perceptions of the role of the teacher that are consistent with the situation in which they teach. The feedback skills and conceptual models of the teaching-learning process necessary for effective supervision have not been readily available to cooperating teachers in the past. Recent innovations in training designs, instructional materials and supervisory procedures have, along with recent research findings, now made it possible to implement a training program to develop an effective corps of cooperating teachers. The project described in this proposal will involve a workshop in which cooperating teachers will be trained to use these new supervisory tools. In addition, this project will test the effectiveness of this workshop by measuring the extent to which student teachers working with the trained cooperating teachers are able to conceptualize and produce effective teaching behaviors that are consistent with their unique potentials and come to use these behaviors in their own teaching.

The research question of the Pilot Study was: Is there any measurable difference in the behavior of student teachers (in classroom performance and in response to various instruments) working with cooperating teachers having certain kinds of training, as compared to student teachers working with those who have not had such training?

The same research question was asked in the Continuing Study, but the additional question was: Does the prescription of specific differentiated supervisory activities demonstrate further measurable distinctions among these variables?

Review of related literature

This section could become quite extended. The literature concerning student teaching and its supervision is voluminous.

The past decade has produced research and opinion-type literatures concerning student teaching and teacher education which are related to, but beyond the scope of, this report. Other sections of the report make reference to this literature.

It was decided to restrict this review to a very brief summary of the literature concerning student teaching, rather than to attempt a comprehensive survey.

Literature related to the instruments of this study are summarized below in the section on instrumentation.

The dynamic changes taking place in American society have been causing change and expansion in the field of education. A significant portion of the task of coping with the educational changes has fallen upon teacher educators. The most crucial component of teacher-education programs is widely agreed to be that of student teaching. During the years 1965 and 1966 alone, over fifty articles and other publications exclusively devoted to aspects of student teaching were reported (Association for Student

Teaching, pp. 129-156: bibliography).

While most, if not all, teacher training programs contain student-teaching as a component of their total programs, there are wide differences as to the procedures they follow in administering their student-teaching experiences (Brinegar and Laymon).

It is no accident that student-teaching should play so central a role in American teacher education programs. For one part of this question see Iannaccone and Button's fascinating study of its relationship to attitude formation and initiation (1964). Corrigan and Garland (1966) point to two basic reasons for the popularity of student-teaching as a training device. These sources are our democratic value system and instructional theory. In the first place, they claim (following Sharpe, 1956) that modern democratic values prescribe that life preparation involve learning to deal with a changing world. "Education consists not so much in the mastery of specific techniques and skills as in an ever-increasing ability to solve problems." (Corrigan and Garland, p. 11). Secondly, modern learning theory, oriented in large part to direct experience, dovetails nicely with this prescription, and student teaching suits them both:

> The science of learning provides the knowledge that an individual learns best when actually involved in achieving his purposes and solving his problems. Thus the modern concept of direct experience is that it shall provide the learner with an opportunity to solve his own problems. In student teaching experiences, positions are created in order to provide the guidance and opportunities for learning necessary to meet the objective of helping the student prepare, through the integration of theory and practice, to assume responsibility as a beginning teacher (Corrigan and Garland, pp 11f).

With the increasing importance of student teaching has come an expansion in the role of the public school in the preparation of teachers (Brinegar, p 1). Brinegar refers to Andrews' (1965, p 35) suggestion that over 90% of student teaching is now practiced in off-campus non-laboratory schools, primarily public schools,and without college control.

The present study took place in an environment and period in which student-teaching was increasing in popularity and undergoing critical scrutiny aimed at increasing its effectiveness. The cooperative relationship between public schools and colleges and universities was at a high point. This study is an attempt to isolate and describe some of the variables associated with the supervision of student teachers.

Objectives and Hypotheses

In the following discussion, the term "Objectives" will refer to the expected outcomes of the training phase, the Workshops. The term "Hypotheses" will refer to the research phase of both projects.

In the words of the original proposal for a Pilot Study:

> The primary objective of this workshop may be stated as follows: As a result of this workshop, cooperating teachers should be able to help student teachers develop effective teaching behaviors that are congruent with their (the student teachers') unique potentials and teacher role perceptions, and are effective in guiding the learning of pupils in inner-city elementary schools.

This primary objective remained essentially unchanged for both Workshops.

Eight major second level objectives were created to contribute to this primary one. These served as a framework for the instructional process of the Workshops and in turn were the basis for third level evidential performance objectives which structured the specific learning activities.

These second and third level objectives are included in Appendix A in the form in which they were used in the 1968 Workshop. Also included in that Appendix are copies of instructions and worksheets that further document the relationship of activities to objectives.

No formal hypotheses were generated in the initial research designs.

Informally it was hypothesized that those student teachers working with Workshop trained teachers would, on the average, produce better performance in the measures of the study than would the comparison group. Specifically, it was predicted that they would show greater congruence between their instructional intentions and observed classroom performance, more positive attitudes toward teaching, greater evidence of ability to conceptualize the teaching function.

In the Pilot Study, minor hypotheses developed around the dimension of the assignment of student teachers to one situation for the entire semester as compared to two different situations during the semester. It was generally hypothesized that the various measures might show a positive relationship with the full semester assignment.

In the Continuing Study, the same major informal hypothesis obtained. Secondary hypotheses posited that there would be differential performances of student teachers according to the prescribed supervisory treatments: namely, that those student teachers provided the opportunity for feedback from both videotape recording and interaction analysis would perform best on the various measures; that those using videotape recording, but not interaction analysis (though their cooperating teacher had been trained in both), would perform at the next lower level; that those using interaction analysis, but not videotape recording (though their cooperating teachers had been trained in both), would perform slightly less well; and finally, that those student teachers provided with unspecified supervisory techniques would be at the lowest level in their performances.

The rationale for these hypotheses is clear, given the rationale and objectives of the Workshops. Optimum feedback techniques are considered the most useful form of supervision which should result in improved performance. Those trained cooperating teachers who are free to use all techniques at their disposal should help to produce the greatest improvement. Next in efficacy should be those who have videotape recording available, and who also have the conceptual framework of interaction analysis but do not have access to the videotape tool which is perceived as having direct impact value. Finally, it is recognized that many cooperating teachers have developed excellent techniques of their own but that the cumulative effect of those techniques will probably be less than the effect of such techniques coupled with defined specific skills.

These objectives and hypotheses led to the specific educational and research treatments and activities detailed in the next section.

PROCEDURES

Subjects involved in the investigation

There were two classes of subjects involved in the investigation: Elementary Student teachers at Syracuse University and the public school teachers in Syracuse Public Schools and three contiguous districts who were their cooperating teachers.

In both studies there was some attrition from initial assignments as a student withdrew or became ill at a critical data gathering time. The following figures represent those students and teachers who comprised the final subjects of the studies, and who provided the data on which the findings were based.

In the Pilot Study, thirty-one teachers who had been participants in the 1967 Summer Workshop and twenty-four teachers who had not been participants, all in the City School District, served as the cooperating teacher group in the Fall semester, 1967.

Thirty-four student teachers, senior undergraduates in Elementary Education, were assigned to these cooperating teachers and became the student teacher group of the investigation.

These teachers and student teachers were identified as thirty-one teachers and eighteen student teachers in the "Workshop group," and twenty-four teachers and sixteen student teachers in the "Comparison group."

The apparent disparity in the number of subjects is occasioned by the design to test the influence of full semester placement in one situation as compared to changing situations each quarter. The following table indicates the number of subjects in each cell.

W	refers to Workshop trained teachers and their student teachers.
C	refers to the Comparison group of Non-Workshop trained teachers and their student teachers.
fs	refers to full semester placement of student teachers
ss	refers to split-semester (change at quarter) placement of student teachers.

		W	C	T
fs	T	10	8	18
	S	10	8	18
ss	T	21	16	37
	S	8	8	16
T	T	31	24	
	S	18	16	

TABLE 1

The Continuing Study involved subjects in both semesters of the school year 1968-69. The cooperating teacher group was comprised of thirty-five 1967 Workshop teachers, fourteen 1968 Workshop teachers, and eighteen Non-Workshop trained teachers. Since some teachers served both semesters, the totals here differ from the table below. Five individuals in the Workshop were from districts contiguous to the City, so that the total W group includes six non-city placements and the total C group includes six non-city placements.

Since all placement of student teachers for the continuing study was initially for the full semester, it was intended that the number of student teachers and cooperating teachers would be equal. However, it was agreed that circumstances would arise which would necessitate switching, and that that would be done as long as the switch was within the same treatment sub-group. The following table indicates the final distribution of subjects for the continuing study.

		W		C	TTs
		'67	'68		
Fall Semester	T	2	21	6	29
	S	27		6	33
Spring Semester	T	12	14	12	38
	S	26		12	38
		14	35		
T	T	49		18	67
	S	53		18	71

TABLE 2

Participants are listed in Appendix C.

Educational and research treatments and activities

This section will be divided into the treatments and activities of the training phase and the research phase.

The Training Phase

The training phase has been described in some detail in previous project reports (Clayton, 1967, 1968a, 1968b, 1969). Material from these reports will be used extensively in this section.

The 1967 summer Workshop in the supervision of elementary student teachers was planned and conducted by Dr. John Hough and Dr. Thomas Clayton, Associate Professors, School of Education, Syracuse University. It was an intensive four-week program with sufficient instructional time to grant six semester hour credits. Tuition and travel allowance to the thirty-three participants were paid by the New York State Education Department. An additional stipend to participants was paid from the funds of the Urban Teacher Preparation Program at Syracuse University. The instructional program was generated by the instructional objectives described above and displayed in Appendix A.

Since the instructional activities of the 1967 Workshop have been described in some detail in previous reports (Clayton 1967, 1968a), it is appropriate in this report to concentrate on the activities of the 1968 Workshop for the Continuing Study, indicating major changes that were made based on the experience of the Pilot Study.

The 1968 Summer Workshop for the Continuing Study was conducted by Dr. Clayton and Dr. Wilford Weber, Assistant Professor, School of Education, Syracuse University. The program was extended to five weeks on a schedule that permitted six-semester hours of credit. Tuition, travel allowance and stipends were paid to the thirty-five participants by the State Education Department.

Where the 1967 program was restricted to Syracuse City teachers, the 1968 program enrolled five teachers from contiguous districts and included two kindergarten teachers.

The format and instructional program for 1968 followed the pattern established in the Pilot Study. Changes included:
--Increased time and attention devoted to the viewing and analysis of the videotapes of participants teaching in their regular classrooms.
--A slight reduction in the emphasis on theoretical models, especially those having to do with learning theory.
--Modification of the micro-teaching activities to eliminate the immediate re-teach cycle, viewing the second micro-teaching session as the re-teach episode, and emphasizing more strongly the supervisory engagement in the micro-teaching.
--Generally greater attention to skill development in supervisory behavior.

The Workshop Activities were summarized in a Progress Report (Clayton, 1968b):

> Workshop Activities
>
> To provide technological support for the Workshop, two graduate assistants from Instructional

Technology were employed. One was currently a graduate assistant in the Division of Teacher Preparation, and the other volunteered to start his summer assignment early. During the month of May, they videotaped each of the thirty-five prospective workshop participants in their own classrooms to provide data for the initial phases of the workshop. Approximately twenty minutes of teaching activity was recorded for each participant.

A sampling of those recordings has been retained at the University as a record of activities and for further use.

Two experienced teachers, employed as graduate assistants to supervise student teaching, were included in the Workshop roster. They became both participants and auxiliary staff, and have continued to participate in the research phase of the study.

Because of the July 4 calendar, the group met a full five days the first week, three days the second week, and four days in each of the following three weeks. The Workshop was scheduled from 8:30 to 3:00.

As a matter of convenience, daily secretaries were assigned to keep minutes of the meetings for distribution to the group.

First week activities:

The first week was devoted to developing understanding and skill in the basic intellectual and technical skills to be used in the Workshop and supervision. Orientation, operation of videotape equipment, conceptualizations of "teaching" and "supervision", the beginnings of analysis of supervisory skills, training in Flanders interaction analysis, and the administration of the initial instruments of the research study were all packed into the first week.

Second week activities:

In the second week, heavy emphasis was placed on viewing the tapes which had been made in each participant's classroom, using a triadic pattern of teacher role, supervisor role and observer role. Thus the tapes were used as a basis for initial experience in supervising, using interaction analysis and other techniques developed in the first week.

Because of space and equipment, while one half of the group engaged in the behavior described above, the other half considered ways to conceptualize teaching, using such various models as Flanders' social-emotional climate, Gallagher and Aschner's Cognitive levels, Hughes' public and private criteria, Bellack's analysis of verbal behavior, Clayton's notions of teacher influence and the instructional process. This was applied to the basic assumptions of the objective feedback approach to supervision.

The behavioral objectives dealing with videotaping and interaction analysis were completed for most of the participants during the second week.

Third week activities:

The major activity of the third week was the planning for and carrying out of the first micro-teaching session.

Instead of bringing children in for micro-teaching as in the previous year, the Workshop participants arranged to visit a summer school program in North Syracuse where groups of children were made available for the micro-teaching experience.

One half of the group engaged in micro-teaching on Tuesday, the other half on Wednesday. Monday was largely spent on planning for the micro-teaching since the plan called for a "supervisor" and "teacher" to work together in planning the ten-minute lesson. Included in the planning was a presentation on the Bloom and Krathwohl Taxonomies of Educational Objectives in the Cognitive and Affective Domains.

The group on campus discussed theories of learning and motivation. The group in the field carried out the micro-teaching task, videotaping the episode and carrying out a follow-up supervisory conference using interaction analysis and videotape.

On Thursday, the micro-teaching was critiqued and the group attended a summer session Curriculum Conference on campus.

Fourth week activities:

The fourth week included presentation and discussion by two guest speakers:...Dr. Hough dealing with instructional strategies and Dr. Lohman dealing with areas of concern in student teaching.

Learning theory and perception were the main substantive areas, and considerable time was spent analyzing the micro-teaching videotapes, role-playing a variety of supervisory conferences, and planning for the second micro-teaching episodes.

Fifth week activities:

The fifth week was devoted to planning for, carrying out and analyzing the second micro-teaching sessions and their supervisory follow-ups. When not engaged in these activities, participants worked individually on completing objectives,work sheets and satisfying any objectives not yet met.

Various instruments required for the research activities were filled out.

Subjective Assessment

Participants' response to the Workshop appeared to be very positive, and the instructors felt that the program had worked very well. There was considerable evidence that most participants had changed their perception of appropriate supervisory behavior and that many had developed considerable skill in applying new techniques.

The Research phase

The research phase of the two studies has been complex and evolutionary. The original conception was a relatively simple attempt to assess the probable influence of the Workshop training on the performance of student teachers. As the Pilot study progressed, our perception of the variables multiplied. Data have been gathered that will be reported in this study and stored at the University, but that cannot be analyzed within the scope of this report. There appear to be many interrelationships that could be fruitfully examined.

For both the Pilot Study and the Continuing Study, research was designed to assess the impact, if any, of Workshop training upon the classroom instructional behavior of student teachers and other variables related to teaching.

In the Workshops, selected paper and pencil instruments were administered to participants in the first days and last day of each Workshop. The pre and post administrations included the Teaching Situation Reaction Test and a form of Semantic Differential. The Workshop Activities Assessment Index was completed at the end of each Workshop.

These instruments are described in the next section, and copies are included in Appendix B.

For the school year following each Workshop, student teachers were assigned to cooperating teachers who had been Workshop participants and to an otherwise equivalent group who had not participated in such training. The large majority of regularly enrolled undergraduate students registered for student teaching in the semesters under study participated in the program. Those requiring special placements, those required to fill placement commitments in suburban schools and graduate student teachers were not included.

In the Pilot Study, active research procedures took place only in the Fall Semester. In the Continuing study, placements during both semesters were used.

In the Pilot Study, the Workshop group and the Comparison group were equivalent in number (see analysis of subjects above). Approximately half of each group was assigned to a full semester with the same cooperating teacher. The other half followed the more conventional pattern (for Syracuse University) of having two assignments, at different grade levels, during the semester.

In the Continuing Study, a more complex design was projected. Four treatment groups were formed, equivalent in number, three involving Workshop trained teachers and one involving non-participants in the Workshops.

Group A was asked to use both Interaction Analysis and videotape recording procedures in their supervision. Group B was asked to use videotape recording, but not Interaction Analysis, and Group C was asked to use Interaction Analysis but not videotape recording. Group D, not trained in the Workshops, used unspecified techniques that they had developed through their own experience (see memoranda in Appendix D).

During the 1968 Workshop, participants indicated their preference for inclusion in Groups A, B or C. These preferences were followed where possible in the assignment to treatment groups. In some cases, second order preference was necessary because of the logistics of delivery of videotape equipment, of similar treatment within the same school or because of the need for equivalent size groups. 1967 participants were assigned to treatment groups without consultation.

In both the Pilot Study and the Continuing Study, arrangements were made to provide the support of videotape equipment to those designated to use it: in the Pilot Study, all those in the Workshop trained group; in the Continuing Study, those in Groups A and B.

Three sets of General Electric Tri-Pac videotape equipment ($\frac{1}{2}$ inch tape) were provided by the Audio-Visual Service of the Center for Instructional Communication at the University. These sets were rotated among those schools designated to use videotape in the supervision of student teachers. Schedules for such rotation are included in Appendix D among the sample memoranda.

No attempt was made to prescribe the specific use of videotape equipment. Within each school, the teachers were responsible for scheduling their own use of the equipment while it was there. There is evidence that there were tremendous variations in the frequency and quality of utilization from teacher to teacher and from school to school.

In the Pilot Study, the equipment was rotated so that it reached each teacher-student teacher pair six times during the semester. Reactions to this scheduling caused a revision for the Continuing Study so that each pair received the equipment three times during the semester, thus having a longer continuous period of time to develop its use.

With the exceptions of a few samples retained, tapes were recorded, viewed and re-used. Many participants recommended retaining the recorded tapes in order to compare early and later performances. This would probably have been a valuable supervisory technique, but it was decided that the cost would be prohibitive in this study.

One of the broader objectives of these studies was an attempt to redefine the roles and responsibilities of the college supervisor and the cooperating teacher.

It was felt that the studies provided an opportunity to assign greater responsibility for supervision to the cooperating teacher and to shift the college supervisor's role toward that of a liaison between the University and the public school, a trouble shooter when problems occurred, and a conductor of weekly seminars. Thus, the college supervisors working with the experimental groups were asked to observe student teachers primarily to obtain data for use in seminars and to move away from the more conventional supervisory-evaluative use of observations unless asked by cooperating teachers. There is some question whether, in actuality, this role shift occurred.

In order to make this shift more probable, graduate students in Elementary Education to be employed as college supervisors participated in the Workshops and were assigned to the supervision of specified student teacher groups in the studies.

In the Pilot Study, Mr. Walter Koukal participated in the Workshop and became the supervisor for all of the Workshop group student teachers in the Fall of 1967. Three other Graduate Assistants and Lecturers, non-participants in the Workshop, worked with students in the comparison group.

In the Continuing Study, Mrs. Florence Gray and Mr. DeVillo Sloan were participants in the 1968 Workshop and became supervisors of Workshop-related student teachers in the Fall and Spring semesters of 1968-69.

Mrs. Gray was assigned to Group A which was designated to use both Interaction Analysis and videotape recording in their supervisory activities. Mr. Sloan worked with Group B, to use Interaction Analysis but not videotape recording.

Group C, using videotape recording, but not Interaction Analysis, was supervised by Mrs. Joan Landers in the Fall semester and by Mr. Joseph Rousseau in the Spring semester. Neither of these individuals had been participants in the Workshop, but both received individual instruction and obtained practice experience in the use of videotape recording.

In the Continuing Study, members of Group D, the comparison group, were distributed among three supervisors in the Fall semester and were assigned to Mr. Wayne Dickinson in the Spring semester. No special instructions were given to the comparison group supervisors, and it was assumed that they defined their roles in unspecified conventional ways.

Throughout the year of the Continuing Study, all College Supervisors met regularly (approximately once a month) with Dr. Ernest Lohman, coordinator of student teaching, to develop some commonality of procedures in their work.

In both studies, the principal investigator met with those seminar groups scheduled to use Interaction Analysis during the first two seminar meetings in order to provide sufficient training in Interaction Analysis for them to respond to the feedback process. No attempt was made to have the student teachers achieve competence in the application of the technique, except that practice materials were made available on an individual basis for those who wished to gain additional competence.

For those groups using videotape, a technically trained Graduate Assistant in the Division of Teacher Preparation was available for for training and assistance during the seminars.

The major data gathering device of both studies was a series of scheduled observations of student teachers by trained observers who recorded both an interview and a classroom observation six times during each semester.

Schedules for each series were prepared and communicated to student teachers and cooperating teachers. The training of observers, their reliability, and the procedures of observation are detailed below in the section on Instruments of the Study.

In the Pilot Study, seven observations were made, with the first one considered as part of the training process, rather than as part of data gathering.

In the Pilot Study, a very careful rotation schedule was used so that each observer saw every student teacher at least once and no pattern of observer-teacher familiarity was formed. Subjective analysis of observer reliability for the Continuing Study decided that this degree of rigor was unnecessary, and observer assignments were made on pragmatic bases of availability and convenience, although each student teacher was observed by at least three different observers.

Other than planned observation, data were gathered from the instruments of the studies according to the following schedule.

As indicated above, during the Workshops, participants completed pre and post forms of the TSRT and Semantic Differential, and filled out a Workshop Activities Assessment Index.

In both studies, student teachers filled out TSRT and Semantic Differentials during the first two weekly seminar meetings. On the last day of their student teaching assignment they returned to the University, meeting as a group at 1 P.M., and filled out the post form of these instruments. In addition, at that final session, they completed a statement of their perception of the supervisory behaviors used by their cooperating teachers (Workshop Activities Assessment Index for Pilot Study and Supervisory Activities Checklist for Continuing Study, see description below). They also reacted to two versions of the Minnesota Student Attitude Inventory, one as they would like their students to respond to them (Ideal), and one as they thought their students would actually respond to them (Real).

In a few cases each semester, a few students unable to attend the meeting scheduled themselves for the next week or received and returned the instruments by mail.

Additional data were received from the cooperating teachers within two weeks after the completion of the student teaching. In the Pilot Study, Workshop trained teachers completed the statement of frequency and value of supervisory activities actually used by reacting to the Workshop Activities Assessment Index. In the Continuing Study, all teachers, Workshop and Comparison, provided similar data using the Supervisory Activities Checklist.

It was intended to gather data on all student teachers by having their classes fill out the Minnesota Student Attitude Inventory. However, it was found that there were a number of teachers and schools that had serious reservations about a number of items in that instrument, and there was considerable question about the instrument's viability for primary grades. Consequently, its administration was made optional and its results are reported as a biased sample for whatever value they may have.

Detailed information on these instruments is provided in the next section.

Instruments of the Study

The basic selection of the data gathering instruments of the studies was made prior to the submission of proposals for support of the research activity. Some changes occurred as a result of the continuing evaluation of those instruments and the assessment of continued research experience.

Some background from the literature, description of the instruments, and analysis of their utilization follows. The instruments themselves are included in Appendix B.

1. The Teaching Situation Reaction Test (TSRT).

The TSRT has gone through a series of revisions since it was developed by James K. Duncan and Jack Frymier (see Hough and Amidon, 1963),for use in a non-educational setting. It has been used in many research studies (many of which are described in Hough and Duncan, 1965, Duncan, Hough and Thompson, Feb., 1966, and Duncan and Hough, Sept., 1966).

In its present form (1966 revision) it is designed to measure a person's reaction to teaching situations he is asked to imagine. It has been refined so that it may measure specific non-subject-related aspects of a teacher's perception of his role. Specifically, an item-analysis of the data it produces will reveal four dimensions of this perception:

1) The dogmatism factor (Rokeach, 1960)
2) The human relations factor, using the G.T. Barrett-Lennard (1962) Relationship Inventory, designed to measure positive regard, empathy, congruence, unconditionality, and willingness to be known.
3) The structure factor (Duncan and Hough, Sept., 1966).
4) The objectivity-subjectivity factor, as related to a teacher's use of data about students (Hough and Amidon, 1963).

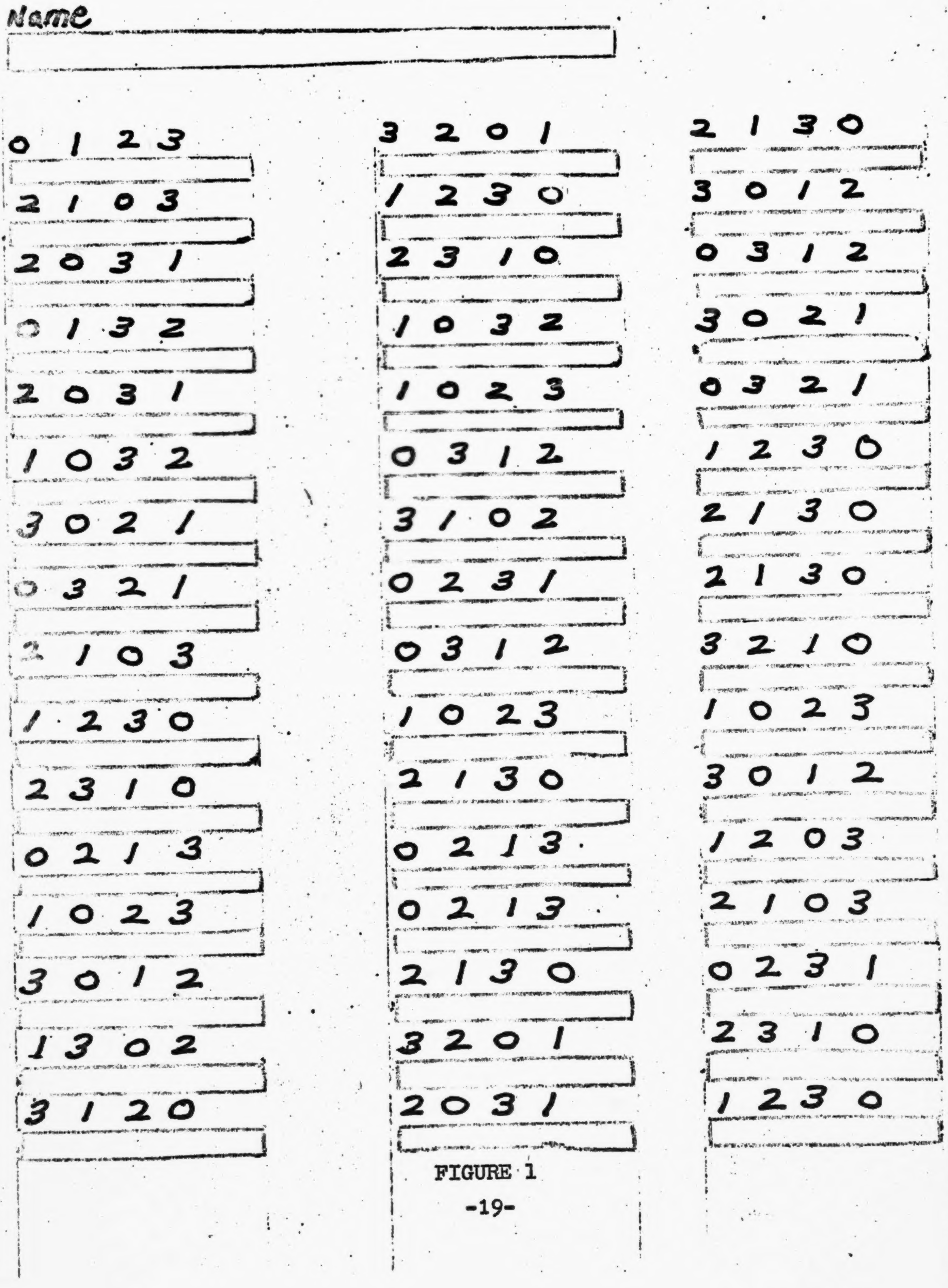
There are forty-eight items in the test, relating to everyday aspects of teaching, such as planning, classroom management, and teacher-pupil relationships. Subjects are asked to rank-order their choices of four possible behavioral reactions to hypothetical classroom problem situations. They place these assigned ranks on an answer sheet which is scored by means of a master key (see Appendix B for the test and answer sheet). The key and directions for using the key are included in Figure 1 and the text below.

Duncan and Hough report in their "Technical Review of the Teaching Situation Reaction Test" upon several administrations of the TSRT in conjunction with other scales such as the California Test of Mental Maturity (Short Form) and the Minnesota Teacher Attitude Inventory. These studies, they report, have helped clarify the TSRT's dimensions and its underlying theory (p. 5). After reviewing a variety of studies, they conclude that the TSRT seems to be both fairly reliable and fake-resistant. It has demonstrated predictive validity, and has "...related to or confirmed findings in the studies of Flanders Interaction Analysis...As it stands the test has merit" (p.31).

The spaces beneath each set of four numbers are cut out as "windows" which are placed over the subject's responses. Then for each question, the following procedure is used for scoring:

1) Start with #3.
2) Determine the number of other responses greater than the responses under #3.
3) Record that number and cross out the response under #3.
4) Repeat the same procedure for #2 and #1.
5) Sum the recorded numbers.
6) Sum the 48 totals calculated during Step 5. This grand total is the subject's score on the TSRT.

2. The Semantic Differential Instrument



Name

0 1 2 3
2 1 0 3
2 0 3 1
0 1 3 2
2 0 3 1
1 0 3 2
3 0 2 1
0 3 2 1
2 1 0 3
1 2 3 0
2 3 1 0
0 2 1 3
1 0 2 3
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2 1 3 0
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1 0 2 3
3 0 1 2
1 2 0 3
2 1 0 3
0 2 3 1
2 3 1 0
1 2 3 0

FIGURE 1

In attempting to get at attitudes toward specific aspects of teaching and instructional behavior, it was proposed to use some form of a Semantic Differential Instrument.

The originator of the Semantic Differential Instrument is Charles E. Osgood. Its description, theoretical rationale and a review of its applications are reported in Osgood, Succi and Tannenbaum (1957). A brief description and review appears in Remmers (Gage, Editor, 1963).

The Semantic Differential can, it is claimed, rather reliably and systematically measure attitudes (seen as predispositions towards evaluative responses) and changes in attitude over time. Its design allows it to be applied toward most, if not all topics, and for purposes of the Pilot and Continuing Studies specific topics relating to Interaction Analysis and a model of the instructional process were selected as stems.

The original design of the instrument included affective reactions to items representing each of the Flanders categories and aspects of The Model of the Instructional Process (Clayton, 1965) on factor scales of receptivity, potency and evaluation. An example of this instrument is included in Appendix B.

After the original Semantic Differential Instrument was administered to the Workshop teachers and the student teachers in the Pilot Study, the instrument was revised to include only those stems which elicited a significant shift in response. The number of scales on each factor was increased in accordance with the general recommendations of Osgood, Succi and Tannenbaum (1957). Each stem was placed on a separate page so that responses would be as independent as possible between items. This instrument is presented in Appendix B.

3. Minnesota Student Attitude Inventory

The Minnesota Student Attitude Inventory was previously used by Flanders (1965, passim). In this monograph he discusses his use of and adaptations with the MSAI, together with some consideration of its reliability for measuring student attitudes towards teachers. His own use of it was in conjunction with Interaction Analysis data in his study of direct and indirect influence.

See also, J.P. Anderson's Student Perceptions of Teacher Influence (1959).

In the present studies, further adaptations were made to simplify the responses of students and the analysis of those responses. A set of directions and answer sheet were developed which called for students to agree (A) or disagree (D) with the statements about the student teacher who had been working with them.

As indicated in the section on research activities above, the use of this instrument became quite suspect with teachers and schools that were concerned with possible negative reactions toward instruction and instructional personnel. Hence, its use with children in these studies was not taken very seriously, and data were used with recognition of the sample bias.

The more important use of this instrument was in the measure of contrast or congruence of the "ideal" and "real" perceptions of the student teachers as they assessed how they wanted and believed that students would assess them.

4. The Workshop Assessment Index and the Supervisory Activities Checklist.

For the 1967 Summer Workshop phase of the Pilot Study the instructors created an assessment index for the workshop cooperating teachers to fill out, in order to collect information about their perceptions of the workshop activities (see Appendix B). The teachers were to respond along two dimensions (predicted usefulness and predicted frequency of use) to twelve items, each of which had been a component of the Workshop. These teachers were to take these again (now actual instead of predicted usefulness and frequency) at the conclusion of their cooperating-teacher assignments, for purposes of comparison.

During the semester the idea developed that it might be useful to administer it to the student-teachers in the Workshop group as well. Therefore, special directions were created (see Appendix) and these people also filled out the index at the end of their student-teaching experiences.

The Workshop Assessment Index was also administered to the workshop cooperating teachers at the conclusion of the 1968 Summer Workshop. Soon afterward, however, the investigators conceived of the idea of constructing a measuring device that all the participants in the study could take at the end of their student-teaching or cooperating-teaching periods. With such an instrument it would be possible to gain information about just how different the treatment groups really were, in addition to learning about the effects of the workshop upon cooperating and student-teachers in the workshop group (as the Workshop Assessment Index had been designed to reveal). Hence the creation of the Supervisory Activities Checklist, a longer index in terms of the number of items, but a simpler test which could be filled out by members of all the treatment groups involved (see Appendix B).

5. The Observation System for Instructional Analysis (OSIA).

The major research technique of the studies was observation of student teachers by trained observers. In a very real sense, the "instrument" includes both the observation system and the observers themselves. The techniques, reliabilities and qualifications of observers are essentially a part of the instrumentation.

The discussion below includes data about the background and development of the system, its description, the training and reliability of observers, and procedures used in applying the "instrument."

A description of some of the early attempts at systematic classroom observation and analysis, together with a discussion of the basic requirements for sound research with such instruments is provided by Donald M. Medley and Harold E. Mitzel (Gage, pp. 247-328). Edmund J. Amidon and John B. Hough cover some of this territory and also report on some more current research findings and applications.

A number of researchers have been concerned with the question of observing and understanding the kinds of interaction that take place in classrooms. One of the earliest was H.H. Anderson (Amidon and Hough, pp. 4-23), who in 1939 studied the integrative and dominative behavior of teachers in the classroom. Anderson set up categories for behavior seen as integrative and those for dominative ones, and has his observers keep a tally of the kinds of interaction that took place between teacher and students. At the end of the observation period the data were processed and analyzed.

From these beginnings, we have, particularly in recent years, seen the emergence of a great many systems of classroom observation designed to measure the quantity and quality of interaction (see Simon and Boyer for a comprehensive and descriptive catalogue of these).

Most of the researchers since Anderson have adhered directly or indirectly to the dichotomy he drew between dominative and integrative styles of teaching. Other names have been given for modes but there is a marked similarity between Anderson's "dominative-integrative," Lewin, Lippett and White's "autocratic-democratic" (Amidon and Hough, pp. 24-46), Withall's "teacher centered-student centered" (ibid, pp. 47-64), Cogan's "preclusive-inclusive" (ibid, pp. 65-88) and Flanders' "direct-indirect" (ibid, pp. 103-116, Flanders, 1965, Amidon and Flanders, 1967).

Flanders is the researcher who developed the now widely used ten-category system, which has been the catalyst for so many of the current systems of observation that are under study. He used the results of the above researchers as a "theoretical basis for conceptualizing the relationship between teacher influence and the behavior and attitudes of pupils." (Amidon and Hough, p.3), and his category system has been the basic tool of educators for assessing the social-emotional climate of classrooms. For evidence in support of the assertion that this climate can objectively and reliably be measured (and that it is related to teaching effectiveness), see Amidon and Hough's second chapter.

The systems of observation used in our Pilot and Continuing studies are examples of the suggestiveness of the Flanders system for expansion and modification toward the accommodation of different goals and uses. Hough has preserved its usefulness in measuring social-emotional climate, while augmenting it so that it may do even more than that. The variations culminating in his thirty-two (or more) category system each possess specific categories so organized that it becomes possible to examine observed instructional behavior in the light of learning theory (see Amidon and Hough, pp. 150-157 and Hough and Duncan, In Press).

Hough's Observation System for Instructional Analysis provides a sophisticated measuring device for the sorts of interaction that takes place incclassrooms. Although our use of it capitalizes upon its virtues vis a vis quantitative measurements, our data and new data collected with it might well be utilized for a wide range of purposes.

During the two years of the study, the Observation System for Instructional Analysis (OSIA, Hough and Duncan, 1969) was going through an evolutionary process.

The original decision to use the developing instrument was made in the summer of 1967 as Dr. Hough and Dr. Clayton considered the kind of data that would be helpful in recording the instructional behavior of student teachers.

Since Dr. Hough was available to participate in the training of observers, it was felt that the Pilot Study should use the newly developed tool and, at the same time, be useful in its analysis and development. Consequently, the September 1967 revision of the System was used in the Pilot Study.

By the time of activation of the research phase of the

Continuing Study (Fall 1968), the System had evolved into a more complex category system in which student behavior and teacher behavior were in parallel categories.

The relative benefits of using the same system in the two studies, or of using rather different versions of the system were considered. If the same system were used, comparisons between the two studies would be facilitated. On the other hand, in terms of instrument development, the use of the September 1967 form in the Continuing Study would indicate failure to utilize continuing development, require dependence on an unpublished instrument that would probably not generate further research, and would miss some of the data available with the new version.

Since, again, Dr. Hough was available to participate in the training of observers, it was decided that the current version of the Observation System should be used in the Continuing Study.

A brief description of the 23 category system used in the Pilot Study is included below, followed by a more extended description of the procedures used in the Continuing Study.

OBSERVATION SYSTEM FOR INSTRUCTIONAL ANALYSIS

September 1967 Revision
CATEGORIES USED DURING STUDENT TEACHER PILOT STUDY,
FALL 1967

TEACHER BEHAVIOR

1. Clarifies and accepts student feelings and/or gives non-evaluative encouragement.
2. Clarifies and accepts student ideas and questions.
3. Answers student substantive questions.
4. Teacher-directed silence (used during information giving by means of chalk board, overhead, etc.).
5. Gives substantive information or opinion.
6. Gives substantive procedural information or answers substantive procedural questions.
7. Asks open questions (divergent, evaluative).
8. Asks closed questions (cognitive memory, convergent).
9. Gives managerial procedural information or answers managerial procedural questions.
10. Criticizes or rejects student ideas, behavior or feelings.
11. Gives corrective feedback for incorrect ideas or behavior.
12. Gives confirmation of correctness of ideas or behavior.
13. Praises student ideas, behavior or feelings and/or gives evaluative encouragement.

STUDENT BEHAVIOR	14.	Gives closed substantive verbal response (cognitive memory, convergent).
	15.	Gives open substantive verbal response (divergent, evaluative).
	16.	Gives expression of feeling.
	17.	Asks substantive or substantive procedural questions.
	18.	Asks managerial procedural questions.
	19.	Silent overt activity.
	20.	Silent covert activity.
OTHER	21.	Student to student interaction designation.
	22.	Student followed by student interaction designation.
	23.	Instructionally non-functional behavior.

MATRIX FOR THE 23 CATEGORY SYSTEM

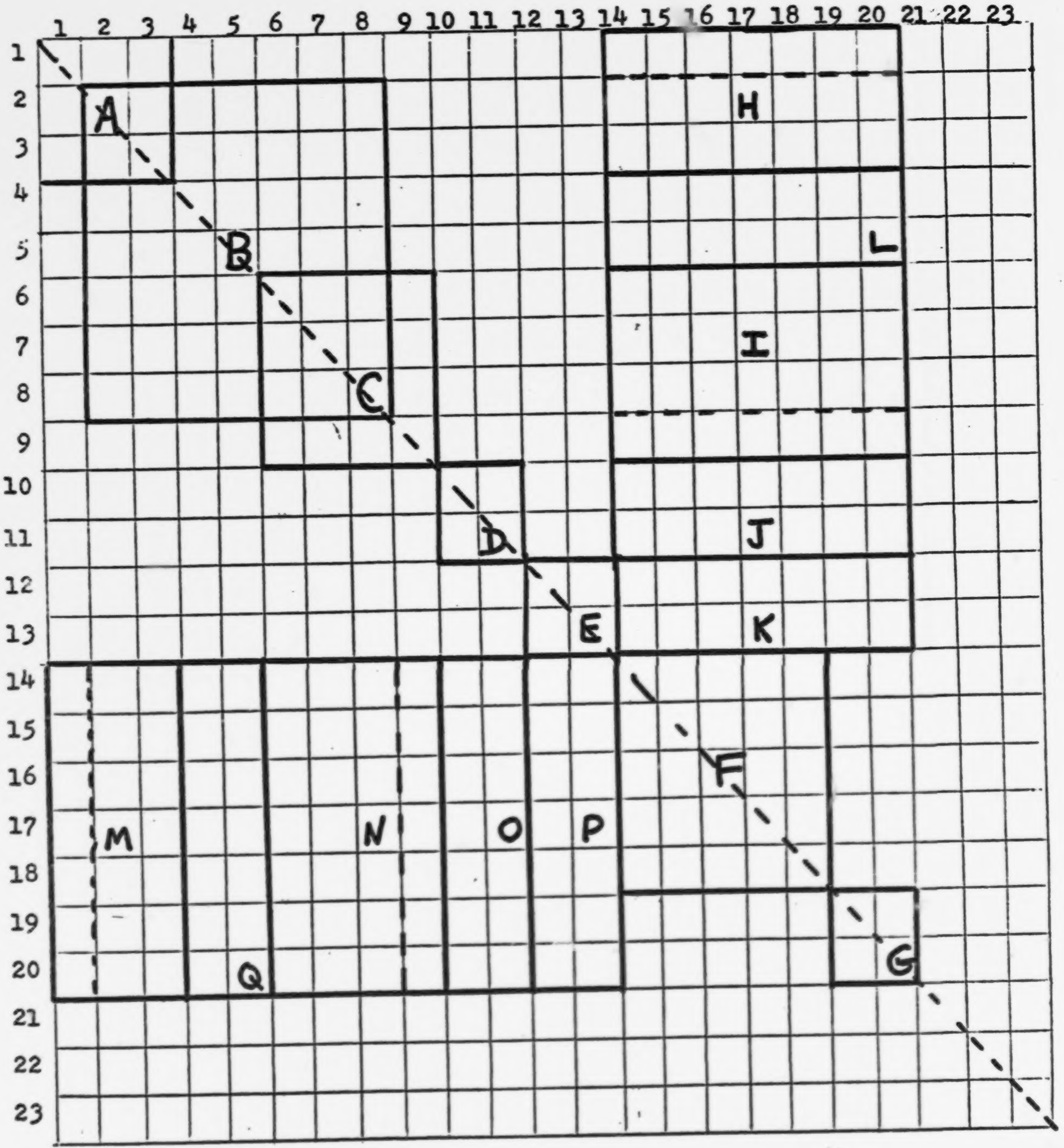
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
A
B
C
D
E
F
G
H
L
I
J
K
M
N
O
P
Q

FIGURE 2

INTERPRETATION OF THE SPECIFIC AREAS OF THE MATRIX FOR THE 23 CATEGORY SYSTEM (FIGURE 1)

Area A represents the area of extended acceptance and clarification of student ideas and feelings as well as non-evaluative statements of encouragement and response to student substantive questions.

Area B represents the area of extended teacher substantive behavior, primarily initiation.

Area C represents the area of extended teacher substantive solicitation.

Area D represents the area of extended teacher negative appraisal behavior.

Area E represents the area of extended teacher positive appraisal behavior.

Area F represents the area of extended student behavior.

Area G represents the area of extended silence.

Area H represents the area of extended student response to teacher clarification.

Area I represents the area of extended student response to teacher solicitation.

Area J represents the area of extended student response to negative appraisal behaviors on the part of the teacher.

Area K represents the area of extended student response to positive appraisal behaviors on the part of the teacher.

Area L represents the area which encompasses most of both areas H and I. It also includes thearea of notation for those occasions when student behaviors follow teacher-directed silence and teacher initiation of substantive information.

Area M represents the area of extended teacher response with clarification behaviors.

Area N represents the area of extended teacher response with substantive solicitation behaviors.

Area O represents the area of extended teacher response with negative corrective feedback behaviors.

Area P represents the area of extended teacher response with positive appraisal behaviors.

Area Q represents most of the area encompassing Areas M and N plus the area marking occasions when student behaviors are followed by teacher initiation of substantive information.

The form of the Observational System used in the Continuing Study is more difficult to describe. It classifies classroom behavior into fifteen specific categories which can be engaged in by both students and teacher (15T and 15S parallel categories). Two additional classes of behavior are defined irrespective of the specific T-S identification. Thus it is frequently referred to as a 32-category system. However, sixteen categories (8T and 8S) can be further classified in two ways (open and closed) giving a potential of 48 categories or sub-categories.

In the Continuing Study, theshorter form (32 categories) was used since the greater refinement of the extended version did not appear to be relevant to the required data.

The first twenty-six categories of the system are divided into three major sections (Figure 3). These are the substantive, appraisal and the managerial. Substantive behaviors deal with content. This relates to the knowledge or skills that are displayed in the classroom with regard to the subject matter that the teacher considers as part of his objectives.

Managerial behaviors relate to procedures of running the classroom that are not directly related to content. For instance, if the teacher requests that the students take out their math books this is clearly a substantive behavior because she planned to use the text in the lesson. If a student requests permission to get a drink of water, and this is not part of the lesson, this behavior is managerial.

The appraisal behaviors relate to the feedback exhibited within the classroom. These appraisal behaviors inform the individual or group as to the "rightness or wrongness" of previous behavior. They are not to be used to identify good and bad students or teachers. These three major categories are broken down into more specific teacher-student behaviors.

Figure 3 indicates the two headings, teacher behaviors and student behaviors. Under each heading and T1, T2,T3 etc., and S1, S2, S3 etc. the T refers to teacher and the S refers to student behavior. The numbers refer to the type of behavior, the capital letter refers to who is exhibiting that behavior. Both teacher and student can exhibit the same type of behavior. There are fifteen behaviors that both teacher and student can display in this system. The last two behaviors, X 16 and Y 17, are of a different nature. X 16 refers to confusion, and Y 17 is used to designate that a student has spoken but is followed by another student speaking. In between the two S recordings on the tally sheet the observer would place Y 17.

The category of substantive clarification refers to statements that clarify preceding comment. A student or teacher may ask for clarification of content. In recording observations, this behavior takes precedence over other behaviors. Responding to substantive solicitation is answering a question that refers to the content under discussion. Initiating substantive information can be either lecturing or a declarative statement on content. Soliciting substantive responses refers to asking a question about the content under discussion. These categories are the substantive categories.

The appraisal behaviors are divided into five categories. Corrective feedback is exhibited when the teacher or another student corrects misinformation with the correct information. Confirmation is exhibited when one is told that the information is correct. Acceptance occurs when an opinion is accepted as stated, not in the sense that it is correct but rather in the sense that there is not one correct answer or that the response is usable without requiring value judgment. Positive personal judgment occurs when a correct answer is given but someone, either teacher or student, praises the answer; negative personal judgment is just the opposite. A wrong answer is given and the person is told so in a personal way.

Managerial behaviors are very similar to substantive behaviors. The major difference is that they refer to classroom management irrespective of specific content. A managerial clarification refers to clarifying a question or statement concerned with classroom procedures. Responding to a managerial solicitation refers to answering a managerial question. Initiating managerial information is a managerial statement or lecture. Soliciting a managerial response is asking a question concerned with procedure or routine.

The last behaviors to be discussed are the silence behaviors. Silent covert behaviors occur when it is clearly expected that someone is thinking, perhaps preparing to respond to a question. Silent overt behavior is planned silence during which time the students are working on content connected with the lesson. This can be recorded when the teacher is writing on the board.

The Observational System for Instructional Analysis

		Teacher Behaviors	Student Behaviors	
Substantive	T1	Substantive clarification	S1	Substantive
	T2	Responds to substantive solicitation	S2	
	T3	Initiates substantive information	S3	
	T4	Solicits substantive response	S4	
Appraisal	T5	Corrective feedback	S5	Appraisal
	T6	Confirmation	S6	
	T7	Acceptance	S7	
	T8	Positive personal judgment	S8	
	T9	Negative personal judgment	S9	
Managerial	T10	Managerial clarification	S10	Managerial
	T11	Responds to managerial solicitation	S11	
	T12	Initiates managerial information	S12	
	T13	Solicits managerial response	S13	
Silence	T14	Silent covert activity	S14	Silence
	T15	Silent overt activity	S15	

Teacher or Student Behavior
X 16 Instructionally non-functional behavior
X 17 Interaction separation designation

Categories 1-4, and 10-13 may be further categorized as a. closed or b. open.

FIGURE 3

X

	T4										
	S2										
	T6										
	T3	𝍸									

FIGURE 4

The thirteen basic categories, plus the silence category as described above are the basic behaviors contained in The Observational System for Instructional Analysis.

This system allows for recording some aspects of nonverbal as well as verbal behavior. If the teacher gives a student an instruction and the student responds, this is recorded even though the student did not say a word.

The categories of the Observational System for Instructional Analysis are recorded in five second intervals. Tallies are recorded on the tally sheet (see Figure 4) at least every five seconds, or less if the behavior changes in less than five seconds. The tally sheet is made up of four major columns as outlined by heavy black lines. Each column is again divided into three sections or boxes. The research observer started each tally in the middle set of boxes of the first column with an X. For example, when the teacher asked a short question, a T4 was recorded. This would be followed by a student response or S2. The teacher would say, "correct," a T6, and then perhaps she would lecture, recorded as a T3. The lecture could take 30 seconds. Instead of recording a T3 every five seconds the observer places a slash mark in the box next to T3 every five seconds. The sample tally sheet has five slashes next to the T3 recording. This indicates that the teacher spoke for a total of thirty seconds, five for the T3 recording and five for each slash. In this manner the research observer recorded classroom interaction.

The Prediction Matrix

Each student teacher was interviewed by the research observer before an observation. The purpose of this interview was to allow the research observer to predict what classroom behavior would be observed according to the information gathered from the student teacher. Several questions were asked in order to determine what behaviors the observer would record. The questions were as follows:

1. What type of lesson am I about to observe?
2. How do you plan to present the lesson?
3. Will this be new material or old?
4. Will the students be doing any silent work?
5. Do you anticipate any problems with the lesson and, if so, what kind?
6. How do you handle student responses?

If the student teacher was unable to answer the question as stated then the observer would restate them. These responses were then interpreted in terms of categories of The Observational System.

The research observer would then record his prediction on a matrix (Figure 5). The matrix is divided into four main sections. Each of these sections is outlined by heavy black lines on the figure. Across the top and down the left side of the matrix are the symbols that correspond to the symbols used by the observer when using the analysis system. Within each square are cells which were filled in to relate the type of predicted behavior in accordance with the interview. The upper left hand square refers to teacher behavior only, the upper right hand square refers to teacher-student interaction (student behavior following teacher behavior), the lower right hand square refers to student behavior only and the lower left hand square refers to student-teacher interaction (teacher behavior following student behavior). In the appropriate cell within each square, the research observer would record an H if the student teacher anticipated a high frequency of that type of behavior in her lesson, an M if a medium frequency of that type of behavior and an L if lower frequency but some of that type of behavior. Nothing was recorded if the student teacher did not indicate that she was expecting a certain behavior. If, for instance, the student teacher expected to lecture for most of the class period, then within the teacher square and the T3, T3 cell the observer would place an H. However, if the student teacher expected a lot of questions and answers during the class period then the researcher would place an H in the T4, S2 box. Likewise if the teacher said that there would be some questions and answers but not exclusively, then an L or M might be recorded. The prediction matrix could then be compared to the actual tally of classroom performance.

5A. Observer Reliability

The four observers for the Pilot Study underwent a period of training in the 23 category Observation System for Instructional Analysis. Their training was aimed at two basic objectives. First, they needed to become familiar with the system itself, enough so that they could ultimately record classroom interaction with some proficiency at five-second intervals. This part of their training consisted of practice sessions using both audio and videotapes of classroom episodes, plus discussion of the subtleties of the system and the development of ground rules for discrimination between categories when ambiguities arise. The final phase of this part of the training was an actual two-week observation period in which all the student teachers in the Pilot Study were observed on the job. Training was under the direction of Dr. Hough and Dr. Clayton.

The second objective of the training sessions was to

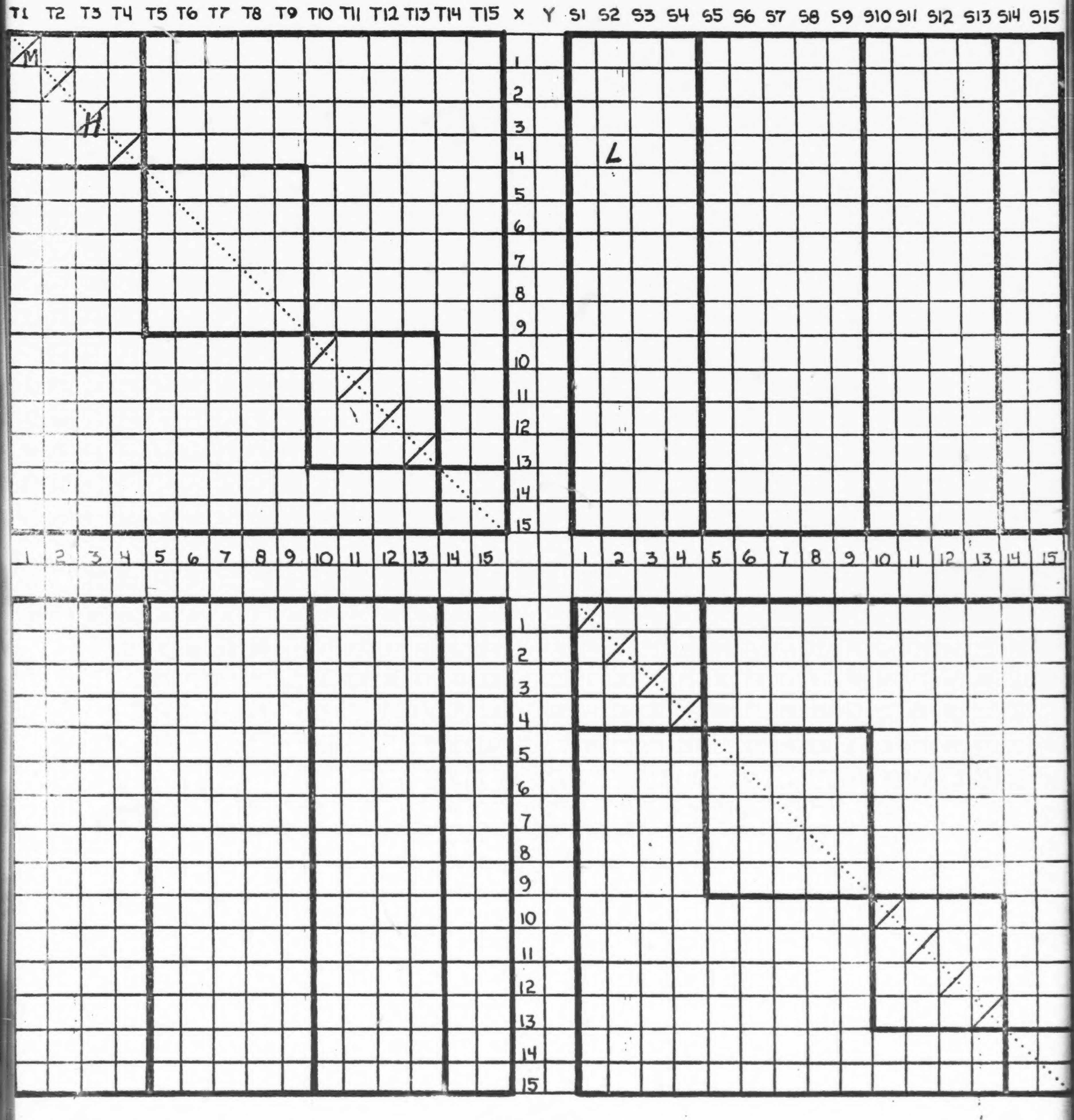
T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T11 T12 T13 T14 T15 X Y S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15
M
H
L
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

FIGURE 5

reach a point where the observers were as similar as possible with respect to the data they would collect were they all to do interaction analysis on the same teaching segment. The goal here, in other words, was to make their observation techniques as uniform as possible. If the data they were to collect was to be assimilated, a high degree of consistency among them was obviously necessary.

The only example available to the observers at that time was Flanders' approach to this problem in his early study involving his ten category system (Flanders, 1965). His technique was to use the Scott Coefficient, and this prototype was followed.

The four observers were brought together, at approximate intervals of two weeks, in order for them all to record data on one teaching segment, usually on videotape. Their data were analyzed, their Scott coefficients of reliability (with one-another) were computed. Since this was the first use of this category-system, no criterion coefficient was established. Observers simply had to proceed with and report the reliabilities achieved at each session. While there can be no absolute standards, one general guideline for evaluating these coefficients is Guilford's (1965, p. 145).

less than .20 slight
.20 - .40 low
.40 - .70 moderate
.70 - .90 high

Below is a summary of the reliability figures.

Reliability Check #	Mean of Reliabilities Between All Possible Pairs of Observers (6)	Range of Reliabilities Between All Possible Pairs of Observers (6)
1	.58	.31 - .73
2	.42 (.62)*	.15 - .63 (.51 - .70)*
3	.63	.54 - .73
4	.65	.57 - .76
5**	.67	.54 - .76
6	.75	.69 - .80
7	.67	.62 - .71
8	.69	.56 - .77

* Upon inspection it was realized that the low original reliability was a direct result of difficulties among the observers with respect to discrimination between categories 14 and 15 (see Appendix B or text above). A second computation of reliability was then made in which observer tallies in categories 14 and 15 were considered as tallies in one instead of two different categories. The percentages in parentheses reflect the results of this computation.

** Reliability checks 5 and 6 were made during the same morning.

In the Continuing Study it was determined by the principal investigator that a Scott interobserver reliability of .65 would have to be attained before any data would be collected. Reliabilities were computed midway through the training of the observers and before each set of observations was begun. The data for the observers in the continuing study follow.

	Grade Level	Medium	Date	Interobserver Reliability	Range Low -	High
Training	Primary	Live	9-30	.62	.38	.70
	(Primary	Live	10- 3	.82	.79	.85
	(Primary	Video	10-21	.83	.76	.85
Fall Semester	(Primary	Video	11- 4	.80	.77	.85
	(Primary	Video	11-17	.79	.71	.84
	(Primary	Video	12- 4	.84	.79	.88
	(Primary	Video	1- 8	.69	.65	.81
Training	Intermediate	Video	2-10	.59	.42	.63
	(Primary	Video	2-17	.83	.76	.89
	(Primary	Video	3- 3	.81	.78	.83
Spring Semester	(Jr. Hi.	Audio	3-17	.77	.72	.81
	(Jr. Hi.	Audio	4-14	.71	.68	.76
	(Jr. Hi.	Audio	4-28	.85	.78	.89
	(Jr. Hi.	Audio	5-12	.79	.76	.81

Using the 32 category system required constant monitoring of reliability in order to maintain performances in the .70 to .90 range. The observers showed a marked decrease in performance when checked just after the semester vacation. Retraining was necessary before the second semester observations could be initiated.

Technical description of procedures used for data analyses.

Instructional analysis data.

The data from the 23 category system for instructional analysis in the Pilot Study were initially compiled into 23 x 23 matrices in which each cell contained the frequency of each diadic set of instructional behaviors. The row was determined by the first element of the diad and the column determined by the second. The pattern of prediction by the student teacher was then compared with the matrix and the percentage of cells predicted which were used was calculated. The percentage of tallies occuring in predicted cells was also computed.

The data from the 32 category system for instructional analysis in the Continuing Study were compiled into 32 x 32 matrices as above.

Data analysis procedures.

Since the Teaching Situation Reaction Test (TSRT) and the Minnesota Student Attitude Inventory (MSAI) produce a single numerical score and since those scores were scaled in an interval manner and were distributed approximately normally, means and standard deviations were used to describe the data. In the exploratory phase of the study, paired t-tests were run on the pre vs. post scores on the TSRT to test for significant gains. In order to compare the MSAI' "real" with the MSAI "ideal", paired t-tests were also run. Data from the Semantic Differential instrument were arranged into frequency distributions and chi-square analysis was performed to test for differences between treatment groups. The Workshop assessment index data were arranged in frequency tables also but no inferential tests were performed on these data.

In order to test the hypotheses for the exploratory (Pilot Study) phase, two 4 x 2 x 6 analyses of variance were performed with repeated measures on the final factor. Factor A was the four treatment conditions. Factor B was shift on the TSRT in the initial analysis. All those subjects who showed a higher post TSRT score than they had on the pretest were included in level one of Factor B. Those subjects who had a posttest TSRT lower than the pretest TSRT were placed in level two. When the analysis was run with the level of MSAI as Factor B, all those student teachers above the median on MSAI were placed in level one while those below the median were placed in level two. Factor C was the convergence of the prediction with the actual observed data (congruence of stated intent and observed classroom instructional behavior). The measure of this was the percentage of tallies in predicted cells.

In the Continuing Study, the model was the same except that the four treatment conditions were defined as described in the design section. Analyses were also run separately on those student teachers who were teaching in the fall semester, 1968, and those who were teaching in the spring semester 1969.

The analysis of variance model used was the least squares solution for unequal cell sizes. It was discussed by Winer (1962, pp. 319-330, 374-378). This became necessary when it was found that restrictions on the assignment of student teachers would make it impossible to design for equal cell sizes. The model is illustrated below where:

a is a treatment

b is the performance on TSRT or MSAI in two levels

c is convergence of prediction with observed performance

		Subjects	Observations					
			c_1	c_2	c_3	c_4	c_5	c_6
		1	X_{111}	.	.	.	.	.
	b_1	2	X_{112}	.	.	.	.	.
		.	.	.	.	.	.	.
		.	.	.	.	.	.	.
a_1			X_{121}					
		.		.	.	.	.	.
	b_2	.	.	.	.	.	.	.
		n	.	.	.	.	.	.
		n+1	X_{211}	.	.	.	.	.
	b_1	.	.	.	.	.	.	.
		.	.	.	.	.	.	.
a_2	b_2	.	X_{221}	.	.	.	.	.
		.	.	.	.	.	.	.
		n+p	.	.	.	.	.	.
		n+p+1	X_{311}	.	.	.	.	.
	b_1	.	.	.	.	.	.	.
		.	.	.	.	.	.	.
a_3	b_2	.	X_{321}	.	.	.	.	.
		.	.	.	.	.	.	.
		n+p+q	.	.	.	.	.	.
		n+p+q+1	X_{411}	.	.	.	.	.
	b_1	.	.	.	.	.	.	.
		.						
a_4	b_2	.	X_{421}	.	.	.	.	.
		.	.	.	.	.	.	.
		n+p+q+r	.	.	.	.	.	.

ANALYSIS OF THE DATA OF THE STUDY AND RESULTS OF THE ANALYSES.

In this section the analysis of the data for the Pilot Study is presented first. Then the analysis of the data for the Continuing Study is given. These analyses are presented with the analysis of variance. The descriptive statistics, further lower-level analyses of variance, and t tests were necessary to ascertain the nature of a particular contrast.

Pilot Study

Table 1 presents the analysis of variance for those subjects in the Pilot Study in all four treatment groups, the first of which was supervised by Workshop teachers for a full semester, the second of which was supervised by one Workshop teacher for a half semester and then by another Workshop teacher the second half semester. The third treatment group was supervised for a full semester by a non-Workshop teacher. The fourth group was supervised by a non-Workshop teacher for the first half of the semester and another non-Workshop teacher for the second half of the semester.

TSRT

Factor B is a description of whether the student increased his score on the TSRT when pre and post tests were compared or decreased in TSRT score under these conditions. Factor C is the congruence of prediction with the actual observed data. This congruence was calculated as described in the preceding section by the measure, percentage of tallies which occurred in cells predicted using the twenty-three category instructsional analysis matrix. The analysis of variance showed a significant F for Factor B ($p < .01$) which indicated that subjects who gained in TSRT score had different congruence of prediction with actual performance than those who scored lower on the post TSRT. The interaction of treatment and TSRT was also significant ($p < .05$). Factor C, the congruence was also significant ($p < .01$) which indicates that the congruence shifted significantly as that measure was repeated through the student teaching experience.

In order to describe these data, means and standard deviations were calculated and are presented in Table 2. The mean convergence on Group 1 ranged from 3 to 58. The mean convergence for Group 2 ranged from 27 to 58. The mean convergence for Group 3 ranged from 28 to 63. The mean convergence for Group 4 ranged from 33 to 69. These were students from those groups who had an increase in TSRT score when

TABLE 1

AN ANALYSIS OF VARIANCE PILOT TSRT

Source of Variation	df	MS	F
Between			
A(treatment)	3	824.25	0.86
B(TSRT)	1	51378.13	53.42**
AB	3	15246.88	15.85*
ERAB	26	961.78	
Within			
C(congruence)	5	5127.45	5.07**
AC	15	1429.66	1.41
BC	5	868.00	0.86
ABC	15	1225.60	1.21
ERCX	130	1010.82	

* $p < .05$
** $p < .01$

pre and post tests were compared. The analysis of variance for these data are presented in Table 3. In this particular case the only significance was in Factor C, congruence (p .01). Table 4 presents the descriptive data for these students. With this grouping those students in Group 1 ranged in mean convergence performance from 26 to 60. Those in Group 2 ranged from 29 to 55. Those in Group 3 ranged from 29 to 58. For the fourth group, the mean convergence ranged from 34 to 53.

The analysis of variance for those students scoring lower on post TSRT than on pre TSRT is presented in Table 5. In this analysis the convergence is significant ($p < .01$) which means simply that the nature of the interaction of A and B was not indicated to be in those groups who scored lower on post TSRT than on pre TSRT.

Table 6 presents the means and standard deviations on the TSRT tests. None of the shifts from pre to post within groups was significant, but in general, when all students within groups were compared the post TSRT scores were lower than the pre TSRT scores.

TSRT Summary

Students generally showed varying convergence within all four groups. There was no consistent pattern within the convergence. There is no evidence to conclude that a specific supervisory treatment influenced the convergence behavior. Therefore, there was no evidence to enable the rejection of the hypothesis that there would be no significant difference between the overall mean congruence of the workshop teachers supervised group and the non-workshop teacher supervised groups. There was no evidence to reject the hypothesis that there was no significant difference between the overall mean congruence of the half-semester group and the full semester group.

There was evidence however, to reject the hypothesis that there was no significant difference between the mean congruence of the various observations for the four treatment groups. However, there was no uniform pattern of differences among these groups. Some groups started with their lowest convergence and completed the experience with the highest convergence. Other groups started with a low convergence rising to the high and then dropping off near the end of the experience. Other groups vacillated between high and low convergence, so there appeared to be no systematic effect within the convergence data.

TABLE 2

DESCRIPTIVE STATISTICS OF CONVERGENCE ON STUDENT TEACHERS WHO GAINED IN TEST SCORE IN THE POST-TEST COMPARED WITH THE PRE-TEST

GROUP	TSRT Level	OBSERVATION 1		2		3		4		5		6	
		$\overline{X}$	S.D.	$\overline{X}$	S.D.	$\overline{X}$	S.D.	$\overline{X}$	S.D.	$\overline{X}$	S.D.	$\overline{X}$	S.D.
1	Increase	31.3	9.9	46.8	21.8	36.3	15.9	58.6	7.9	51.4	12.6	53.8	13.3
2	Increase	27.8	21.9	32.4	24.1	33.9	12.9	47.3	6.6	53.5	12.	58.7	10.1
3	Increase	28.5	24.	31.6	13.9	48.6	20.9	50.5	3.5	63.6	11.2	59.1	5.
4	Increase	37.9	23.4	49.8	11.4	48.1	3.8	33.4	5.9	69.6	4.5	58.1	14.8

TABLE 3

AN ANALYSIS OF VARIANCE PILOT STUDY TREATMENT GROUPS SCORING HIGHER ON THE TSRT IN THE POST-TEST AS COMPARED TO THE PRE-TEST

Source of Variation	df	MS	F
Between			
A(treatment)	3	107.63	0.52
ERAB	6	208.92	0.0
Within			
C(congruence)	5	1067.04	5.10**
AC	15	152.18	0.73
ERC	30	209.30	0.0

** $p < .01$

TABLE 4

PILOT STUDY TREATMENT GROUPS WHO SCORED LOWER ON THE POST TSRT COMPARED WITH PRE-TSRT DESCRIPTIVE STATISTICS

GROUP	TSRT Level	OBSERVATION											
		1		2		3		4		5		6	
		$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
1	Decrease	26.6	10.6	31.1	7.9	38.6	18.5	60.3	8.4	55.5	11.7	55.5	12.1
2	Decrease	29.3	12.5	37.9	15.7	37.4	12.9	47.4	15.1	53.2	10.7	56.9	8.0
3	Decrease	29.4	18.6	35.9	15.0	48.9	19.5	48.8	14.4	54.0	16.2	58.0	8.7
4	Decrease	45.5	23.8	34.5	5.8	38.6	12.1	48.0	17.5	53.6	14.4	48.0	18.3

TABLE 5

ANALYSIS OF VARIANCE PILOT STUDY TREATMENT GROUPS SCORING LOWER ON POST-TSRT THAN ON PRE-TSRT

Source of Variation	df	MS	F
Between			
A(treatment)	3	30.75	0.12
ERA	20	264.83	0.0
Within			
C(congruence)	5	2320.11	11.96**
AC	15	197.90	1.02
ERC	100	194.03	0.0

** $p < .01$

TABLE 6

MEANS AND STANDARD DEVIATIONS ON THE TEACHING SITUATION REACTION TEST PILOT STUDY

GROUP	PRE		POST		t
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	
A	207.5	12.95	204.7	9.58	1.01
B	203.62	12.63	199.25	8.00	1.62
C	201.17	7.38	198.5	15.37	0.45
D	207.14	5.93	203.0	7.91	.94
A+B	205.77		202.28		1.83
C+D	204.38		200.92		0.99
Workshop Master Teacher					
A	204.2	11.1	205.1	12.9	
B (1)	203.5	17.0	186.5	26.5	
(2)	204.5	18.9	191.5	28.5	

MSAI

Data relative to students divided into groups both by treatment and by level of performance on the Minnesota Student Attitude Inventory Real version. In this analysis, the median of the Minnesota Student Attitude Inventory which was filled out by student teachers as they perceived their students would really have filled it out. Those above the median on the MSAI Real were classed as the first level of the B Factor and those scoring below the median were classed as the second level of the B Factor. The analysis of variance for these data is presented in Table 7.

Among all the analyses only the congruence data showed a significant variation ($p < .01$). Looking at each of these levels of the MSAI factor separately, Table 8 presents the descriptive data for these groups. The mean convergence in Group 1 ranged from 28 to 58 with the high performance falling on the fourth observation. The second group ranged from 21 to 53. In this group the highest convergence was on the final observation. In Group C the convergence ranged from 29 to 62. In group 3 also, the general trend was lower to higher convergence as one proceeded through the observations. In the fourth group, the range was from 37 to 57. However, this group seemed to vacillate between high and low convergence on the observations.

The analysis of variance for those people who scored above the median on MSAI Real is presented in Table 9. The only significant variation was in the convergence data across the six repeated measures formed by the observations.

Table 10 presents the descriptive information for those who scored below the median on the MSAI. In those students in treatment one who scored below the median on the MSAI the range was from 26 to 60 on convergence, starting with the low convergence and going to a high convergence. In treatment Group 2 the range was from 34 to 63. This group started with a moderately high convergence dropped to its lowest point near the middle and rose again to the end. Group 3 had a range in mean convergence from 24 to 55 proceeding from low convergence on the first observation to high convergence on the last. Group 4 had a mean convergence range from 22 to 58. This group vacillated in convergence as it was observed through the semester.

Table 11 presents the analysis of variance for these data. Factor C, congruence across the six repeated measures, was the only significant source of variation.

Table 12 presents the means and standard deviations for

TABLE 7

ANALYSIS OF VARIANCE COMPARING LEVELS OF THE MSAI REAL

Source of Variation	df	MS	F
Between			
A(treatment)	3	82.71	0.38
B(MSAI)	1	710.25	3.29
AB	3	166.88	0.77
ERAB	26	216.15	
Within			
C(congruence)	5	3316.30	18.54**
AC	15	233.96	1.31
BC	5	226.52	1.27
ABC	15	225.68	1.26
ERC	130	178.92	

** $p < .01$

TABLE 8

DESCRIPTIVE STATISTICS ON THOSE SUBJECTS WHO SCORED ABOVE THE MEAN IN THE MSAI ON CONVERGENCE DATA

		OBSERVATION											
		1		2		3		4		5		6	
GROUP	MSAI Level	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
1	High	31.1	12.66	28.8	8.7	31.6	10.1	58.3	7.9	46.3	7.2	49.1	12.0
2	High	21.7	11.7	35.0	20.0	37.6	4.2	50.6	12.8	52.9	10.8	53.6	6.4
3	High	33.4	17.0	29.4	17.6	50.1	21.4	49.1	18.2	62.6	6.2	61.0	9.0
4	High	56.0	16.1	37.2	6.0	35.8	6.4	44.6	12.3	57.1	15.2	57.6	22.1

TABLE 9

ANALYSIS OF VARIANCE PILOT STUDY TREATMENT GROUPS IN WHICH SUBJECTS SCORED ABOVE THE MEDIAN ON THE MSAI

Source of Variation	df	MS	F
Between			
A	3	326.35	1.49
ERA	14	219.76	
Within			
C	5	1696.45	10.30**
AC	15	297.66	1.81
ERCX	70	164.72	

** $p < .01$

TABLE 10

DESCRIPTIVE STATISTICS ON THOSE PILOT STUDY TREATMENT GROUPS WHO SCORED BELOW THE MEDIAN ON THE MSAI REGARDING CONVERGENCE DATA

GROUP	MSAI Level	OBSERVATION											
		1		2		3		4		5		6	
		$\overline{X}$	S.D.	$\overline{X}$	S.D.	$\overline{X}$	S.D.	$\overline{X}$	S.D.	$\overline{X}$	S.D.	$\overline{X}$	S.D.
1	Low	26.8	8.8	43.1	18.0	41.7	19.7	60.4	8.4	58.9	11.6	58.7	11.1
2	Low	41.0	3.3	39.2	10.7	34.7	21.5	42.1	14.2	53.9	11.1	63.6	6.3
3	Low	25.0	20.8	40.2	7.8	47.6	17.8	49.3	4.3	50.3	19.7	55.6	5.8
4	Low	22.7	13.5	40.2	15.7	49.6	13.6	43.8	25.3	58.5	16.1	46.9	4.4

TABLE 11

ANALYSIS OF VARIANCE PILOT STUDY TREATMENT GROUPS SCORING BELOW THE MEDIAN ON THE MSAI

Source of Variation	df	MS	F
Between			
A	3	111.23	0.52
ERA	12	212.00	
Within			
C	5	1855.74	9.49**
AC	15	158.85	0.81
ERCX	60	195.49	

** $p < .01$

TABLE 12

MEANS AND STANDARD DEVIATIONS ON MSAI SCORES PILOT STUDY TREATMENT GROUPS

GROUP	REAL		IDEAL		t
	$\overline{X}$	S.D.	$\overline{X}$	S.D.	
A	90.6	9.67	111.4	6.31	9.39**
B	90.5	18.7	112.75	2.90	3.08*
C	86.25	13.6	110.25	7.8	4.54**
D	83.00	21.14	113.25	2.90	3.62**
A+B	90.6	14.2	112.0	4.4	
C+D	84.6	16.6	113.8	5.3	

* $p < .05$
** $p < .01$

TABLE 13

MEANS AND STANDARD DEVIATIONS ON MSAI SCORES PRODUCED BY STUDENTS IN THE CLASSES OF COOPERATING TEACHERS PILOT STUDY

GROUP		$\overline{X}$	S.D.
1		86.3	11.8
2	1st ½ semester	96.7	9.6
	2nd ½ semester	83.4	14.5
3		92.1	11.7
4	1st ½ semester	90.7	9.8
	2nd ½ semester	73.2	12.5

the MSAI data. The data is shown for both Real and Ideal conditions in the filling out of the MSAI. Several t tests were run which indicated that in every case students had a significantly different perception of the way they really thought students would fill out the MSAI as opposed to the way they would really like their students to fill out this instrument.

Group A had a mean on the Real MSAI of 90.6 and the Ideal mean was 111.4. Group B had a mean performance on the MSAI Real of 90.5 and on the MSAI Ideal of 112.75. This general relationship held throughout all four groups.

• As an optional part of the data gathering, the students who were taught by the student teachers in the study filled out MSAI forms. Table 13 presents the mean and standard deviation of those instruments. The mean MSAI for those student teachers in Group A was 86.3 The mean student MSAI for those in Group C was 92.1. For groups B and D who had half semester experiences there were two MSAI's eadh. In Group B on the first half of the semester the MSAI mean was 96.7 and the Group D first half semester mean was 90.7 and in the second half semester, the mean was 83.4 for Group B and for Group D, the mean was 73.2. One might note that the full semester students who were supervised by Workshop teachers had students who filled out MSAI's with lower scores than those who had non-Workshop supervisors. However, those students who had half semester experiences indicated a pattern reverse of the first mentioned, that is, that those student teachers who had workshop cooperating teachers had students who filled out MSAI's with higher scores than those who had non-workshop cooperating teachers.

Semantic Differential

The Semantic Differential instrument measured attitude changes on the part of student teachers and cooperating teachers. Table 14 presents the total shift and mean shift on the Semantic Differential by the student teachers. In general, most of the shifts were in the negative direction, regardless of the group.

For ease of analysis, the items were grouped relative to those in the Clayton Model of Teaching, those in the Flanders' Interaction Analysis System and the one reaction to the concept teaching itself.

In Group 1, there were negative shifts in almost every situation except for potency relative to the Clayton Model items, evaluation and potency relative to the Flanders' items and potency relative to teaching item. In Group 2, there were positive shifts in both receptivity and evaluation to the Clay-

TABLE 14

TOTAL SHIFT AND MEAN SHIFT ON SEMANTIC DIFFERENTIAL PILOT STUDY

	GROUP I			GROUP III			GROUP II			GROUP IV			
	Receptivity	Evaluation	Potency	Receptivity	Evaluation	Potency	Receptivity	Evaluation	Potency	Receptivity	Evaluation	Potency	
Questions 1-28	-50	- 5	37	10	1	-47	103	-14	85	- 2	80	18	Total Shift
	- 5	-.5	3.7	2	.2	-9.6	12.9	-1.8	10.6	-.4	16	-3.6	Mean Shift
Questions 29-50	-40	64	4	37	-3	-16	-33	69	-33	1	2	0	Total Shift
	- 4	6.4	.4	7.4	-.6	-3.2	-4.1	8.6	-4.1	.2	.4	0	Mean Shift
Question 51	- 5	- 3	6	- 8	-15	-15	-37	-48	-49	-7	3	0	Total Shift
	-.5	-.3	.6	-1.6	-3.0	-3.0	-4.6	- 6	-6.1	-1.4	.6	0	Mean Shift

GROUP I	(10 students)	- # 1 - 10
GROUP II	(8 students)	- #11 - 19
GROUP III	(5 students)	- #20 - 27
GROUP IV	(5 students)	- #28 - 35

ton Model, a positive shift in receptivity in relation to the Flanders' System but a negative reaction on all three factors relative to the concept teaching. On Group 2, there were positive shifts in receptivity and potency on the Clayton Model items and in evaluation on the Flanders' items. In Group 4, there were positive shifts relative to evaluation and potency in relation to the items dealing with the Clayton Model, positive shifts in receptivity, evaluation and potency of the items in the Flanders' Interaction Analysis items and positive shifts in evaluation and potency when presented with the concept teaching.

Workshop Assessment Index

Table 15 presents the data collected with the Workshop Assessment Index. These data were collected on the Workshop cooperating teachers at the end of the Workshop and also collected on them at the end of the semester. These data also were collected on each student teacher at the end of the semester experience and, for those who taught two assignments, these data also were collected at the end of the half-semester period. The Index was scored employing the utility of the concepts involved and the frequency which those concepts were used. For the cooperating teachers in Group A, which was a full semester assignment, Workshop cooperating teachers produced a mean of 54 for utility and 48 for frequency. At the end of the semester, when measuring how they had supervised their student teachers, the mean for utility was 39 and frequency 35. The student teachers of these people produced a mean for utility of 35 and a frequency of 25. These were less than those produced by the cooperating teacher. In Group B, the cooperating teachers at the end of the Workshop produced a utility score of 49 and a frequency score of 45. Their student teachers produced a utility score of 33 and a frequency score of 28. The cooperating teachers for the second half of the semester produced a utility score of 40 and a frequency of 32, again lower than that they produced at the end of the Workshop. The student teachers produced a utility score of 29 and produced a frequency score of 19, again considerably less than the scores indicated by the cooperating teacher.

Summary

The findings of the Pilot Study are summarized as follows: There was significant variation in congruence scores in all four treatments when compared both on levels of TSRT and on whole TSRT, on levels of MSAI and whole MSAI performance. The pattern of congruence varied considerably, however, so that there was no uniform conclusion that a particular treatment caused a particular type of congruence pattern.

TABLE 15

MEAN UTILITY AND MEAN FREQUENCY OF USE OF SUPERVISORY TECHNIQUES WORKSHOP ASSESSMENT INDEX 1967 WORKSHOP PARTICIPANTS AND STUDENT TEACHERS ASSIGNED TO THOSE PARTICIPANTS

		SUMMER		END OF SEMESTER	
		UTILITY	FREQUENCY	UTILITY	FREQUENCY
GROUP A	Cooperating Teacher	54	48	39	35
	Student Teacher			35	25
GROUP B(1)	Cooperating Teacher	49	45		
	Student Teacher			33	28
(2)	Cooperating Teacher			40	32
	Student Teacher			29	19

The Real versus Ideal perceptions of student teachers filling out the Minnesota Attitude Inventory form showed that student teachers have considerable variation between the ways that they think they actually are perceived and the way that they would like to be perceived. The student-produced scores on the MSAI were considerably lower than those scores suggested as Ideal by the student teachers, but were in the same range as those scores produced by the student teachers. The student teachers had a relatively well informed feeling about the way students would fill out the MSAI. Attitudes shifted considerably in the process of student teaching as measured by the Semantic Differential. Most of the shifts were in the negative direction.

The Workshop Assessment Index indicated that cooperating teachers found listed techniques to have higher utility and more frequent utilization in the Workshop than they found later when they were actually supervising a student teacher. It was also found that student teachers produced lower scores for both utility and frequency than the cooperating teachers who supervised those student teachers.

Findings from the Continuing Study

The data for the Continuing Study were collected during the school year 1968-1969. In it there were four treatment groups. Treatment one consisted of student teachers supervised by Workshop cooperating teachers who were instructed to use both the videotape recorder and Flanders' Interaction Analysis as part of the supervisory program. The second group were supervised by Workshop cooperating teachers who were instructed to use the videotape recorder but not Flanders' Interaction Analysis as part of the supervisory program. The third group were supervised by Workshop cooperating teachers who were instructed to use the Flanders' Interaction Analysis System for supervisory purposes but had no access to the videotape recorders. The fourth group had cooperating teachers who were not participants in the Workshop and who were allowed to use whatever supervisory techniques which that supervising teacher felt were appropriate. In order to delineate the analysis, subjects from the Fall semester were analyzed separately from those in the Spring semester and then all subjects were combined into an analysis for the total study.

TSRT. Table 16 presents the analysis of variance for the entire set of treatment groups using the TSRT pre to post gain or loss scores to determine levels of Factor B, using the four treatments as Factor A and using the six, repeated-measure congruence sets of data as Factor C. There was no

TABLE 16

ANALYSIS OF VARIANCE

TREATMENT BY TSRT BY CONGRUENCE

ALL STUDENT TEACHERS IN STUDY

Source of variation	df	MS	F
Between			
A (Treatment)	3	378.67	0.41
B (TSRT)	1	17.00	0.02
AB	3	1505.00	1.65
Error AB	62	914.42	
Within			
C (Congruence)	5	1673.00	2.02
AC	15	686.73	0.83
BC	5	1696.20	2.05
ABC	15	1044.73	1.26
Error C	310	828.29	

significant F for any of the factors or interactions in Table 16. Looking at the data divided by levels of Factor B, Table 17 presents the analysis of variance for those students who increased in TSRT score when pre and post test scores were compared. In this analysis only Factor C, the repeated measure congruence data, produced a significant F.

Table 18 presents the descriptive data for this group of student teachers, those who gained in TSRT score when pre and post tests were compared. Those students in Group 1, receiving both videotape and Interaction Analysis supervisory techniques, had a range in mean congruence from 44.7 to 62.1. The congruence was the lowest in the first observation and increased to the middle observation, decreased again, and then increased to the high point at the last observation. For those receiving the videotape-only treatment, Group 2, the congruence data ranged from 44.1 to 63.5. These data decreased after the first two observations, increased to the fifth observation, and then decreased again. For the group receiving Interaction Analysis as a supervisory technique, the range of mean congruence was 47.6 to 59.5. In this instance the lowest congruence occurred in the first observation and the highest congruence occurred in the sixth observation.

For the group receiving no specified supervisory technique, the congruence ranged from 43 to 58.4. This congruence increased from the beginning to the fourth observation and then diminished again to the sixth observation.

Table 19 presents the analysis of variance for students whose TSRT score decreased from the first pre-test administration to the post-test administration. In this analysis only Factor C, the within-group change in congruence, produced a significant F. The descriptive data for these congruence data is presented in Table 20. For Group 1 the lowest congruence was 50.7, the highest congruence was 61.0. The lowest occurred in the first observation, the highest in the second. All subsequent observations were lower than the second observation.

For the second group, receiving videotape feedback only, the congruence ranged from 47.4 to 55.1. These congruences increased from the first to the fourth observation and then decreased. For the group receiving only the Flanders' Interaction Analysis supervisory technique, the mean congruence ranged from 42.4 to 54.5. These were achieved in the second and third observation respectively. In the fourth group with no specified supervisery techniques, the range was from 44.6 to 67.1. These were achieved in the first and third observations respectively.

TABLE 17

ANALYSIS OF VARIANCE

STUDENT TEACHERS WHO GAINED IN TSRT SCORES WHEN PRE- AND POSTTESTS WERE COMPARED

Source of variation	df	MS	F
Between			
A (Treatment)	3	94.52	0.34
Error A	32	277.62	
Within			
C (Congruence)	5	591.11	2.32*
AC	15	216.06	0.85
Error C	160	254.83	

*$p < .05$

TABLE 18

CONGRUENCE OF STUDENT TEACHERS WHO GAINED IN TSRT SCORES WHEN PRE- AND POSTTESTS WERE COMPARED

Group	TSRT level	Observation											
		1		2		3		4		5		6	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Increase	45.2	19.71	51.9	11.91	54.0	24.78	44.7	18.34	51.8	17.58	62.1	12.74
2	Increase	46.2	18.14	49.7	16.87	44.1	16.47	46.6	11.34	63.5	9.44	52.8	10.16
3	Increase	47.6	17.35	52.1	13.33	53.3	16.90	55.7	20.23	52.8	12.57	59.5	17.43
4	Increase	43.4	15.59	47.3	13.34	51.6	16.51	58.4	20.99	54.1	11.31	52.1	14.38

TABLE 19

ANALYSIS OF VARIANCE

STUDENT TEACHERS WITH POSTTEST TSRT LOWER THAN PRETEST TSRT

Source of variation	df	MS	F
Between			
A (Treatment)	3	664.13	2.36
Error A	30	280.99	
Within			
C (Congruence)	5	587.86	2.67*
AC	15	175.77	0.80
Error C	150	220.52	

*$p < .05$

TABLE 20

CONGRUENCE OF STUDENT TEACHERS WHO DECREASED IN TSRT SCORES WHEN PRE- AND POSTTESTS WERE COMPARED

Group	TSRT level	Observation											
		1		2		3		4		5		6	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Decrease	50.7	16.86	61.0	12.32	55.0	8.89	58.5	14.05	50.8	12.33	51.7	17.65
2	Decrease	47.4	24.04	50.6	11.38	52.9	16.19	55.1	14.97	48.6	18.78	48.7	13.92
3	Decrease	45.8	13.72	42.4	10.75	54.5	10.66	51.1	16.78	45.7	17.07	49.4	10.24
4	Decrease	44.6	20.56	51.5	9.47	67.1	20.18	64.8	10.93	59.7	16.95	47.3	16.37

Breaking the data down into the separate-semester analyses, Table 21 presents the analysis based on increase or decrease in TSRT scores for those student teachers assigned in the Fall semester of the 1968-1969 school year. This analysis showed a significant F for Factor B which was the shift in TSRT score and a significant F for Factor C which was the change in the repeated-measure congruence data across the six observations within each treatment group.

Breaking these data into separate levels of B, Table 22 presents the analysis for those subjects whose TSRT score increased when pre and post tests were compared. In this analysis only Factor C, the congruence data within the groups, showed a significant F. The descriptive data for this group is shown in Table 23. The mean congruence data for those who had increased in TSRT when pre and post tests were compared and who were in Group 1 receiving both videotape and Flanders' Interaction Analysis supervisory techniques, showed a range in mean congruence from 33.5 to 63.8, the lowest occurred in the first observation, the highest in the sixth. For those subjects receiving only videotape supervision, the lowest congruence occurred in the first observation which was 38.4, the highest occurred in the fifth observation. This was 62.5. For those subjects receiving the Flanders' Interaction Analysis as a supervisory technique, those subjects produced their lowest congruence in observation four with 47.8 and their highest in observation six, producing 67.8. In the last group, with no specified supervisory techniques, the first observation was the lowest congruence, 32.8. The third observation was the highest, 55.44.

Table 24 analyzes the data for those subjects with lower post test TSRT scores than pre test TSRT scores who taught in the Fall semester. In this analysis there was no factor or interaction producing a significant F.

Table 25 presents the mean convergence data for these groups. Since there were no significant differences, these data were not discussed.

Table 26 presents the analysis of variance for those subjects who were assigned to student teaching in the Spring semester of the 1968-1969 school year. In this analysis, Factor B--the level of TSRT score, and the interaction of the treatment A with the TSRT level were significant.

Breaking down the data into levels of B so that the interaction AB can be analyzed, Table 27 presents the analysis of variance for those students in the Spring semester who increased in TSRT score when pre and post tests were compared. In this analysis there were no significant F's. Therefore,

TABLE 21

ANALYSIS OF VARIANCE

TREATMENT BY TSRT BY CONGRUENCE

FALL SEMESTER STUDENT TEACHERS

Source of variation	df	MS	F
Between			
A (Treatment)	3	152.33	0.76
B (Tsrt)	1	2636.50	13.08**
AB	3	517.71	2.57
Error AB	25	201.53	
Within			
C (Congruence)	5	1063.45	4.43**
AC	15	184.07	0.77
BC	5	185.00	0.77
ABC	15	49.77	0.21
Error C	125	240.28	

**$p < .01$

TABLE 22

ANALYSIS OF VARIANCE

FALL STUDENT TEACHERS WHO GAINED IN TSRT SCORE WHEN PRE- AND POSTTEST WERE COMPARED

Source of variation	df	MS	F
Between			
A (Treatment)	3	255.04	1.13
Error A	14	226.23	
Within			
C (Congruence)	5	884.14	3.74**
AC	15	163.10	0.69
Error C	70	236.38	

**$p < .01$

TABLE 23

CONGRUENCE OF FALL STUDENT TEACHERS WHO GAINED IN TSRT SCORES WHEN PRE- AND POSTTESTS WERE COMPARED

Group	TSRT level	Observation											
		1		2		3		4		5		6	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Increase	33.5	15.07	50.5	12.62	46.7	19.02	43.8	23.09	46.0	8.61	63.8	10.47
2	Increase	38.4	12.49	52.6	15.11	44.1	20.14	47.3	12.81	62.5	10.90	52.1	11.34
3	Increase	54.3	21.81	50.5	17.76	48.2	17.76	47.8	22.04	57.7	9.66	67.8	10.88
4	Increase	32.8	3.54	41.8	16.45	55.4	24.52	44.1	19.67	54.7	5.98	54.7	9.33

TABLE 24

ANALYSIS OF VARIANCE

FALL STUDENT TEACHERS WITH POSTTEST TSRT SCORES LOWER THAN PRETEST TSRT

Source of variation	df	MS	F
Between			
A (Treatment)	3	191.27	1.12
Error A	11	170.19	
Within			
C (Congruence)	5	312.32	1.27
AC	15	88.06	0.36
Error C	55	245.24	

TABLE 25

CONGRUENCE OF FALL STUDENT TEACHERS WHO DECREASED IN TSRT SCORES WHEN PRE- AND POSTTESTS WERE COMPARED

Group	TSRT level	Observation											
		1		2		3		4		5		6	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Decrease	46.1	15.06	56.6	14.10	58.5	4.86	55.6	9.61	53.9	7.99	54.4	15.69
2	Decrease	30.0	21.74	52.3	18.41	44.6	16.09	42.8	13.59	57.2	12.54	56.2	10.52
3	Decrease	44.1	6.87	49.0	9.42	50.4	11.24	49.2	17.80	56.7	20.92	57.4	15.92
4	Decrease	48.2	22.82	45.0	5.19	57.1	27.54	55.8	16.01	54.9	5.37	53.3	23.06

TABLE 26

ANALYSIS OF VARIANCE

TREATMENT BY TSRT BY CONGRUENCE

SPRING STUDENT TEACHERS

Source of variation	df	MS	F
Between			
A (Treatment)	3	1803.38	1.18
B (TSRT)	1	25535.50	16.75**
AB	3	7229.16	4.74*
Error AB	29	1524.70	
Within			
C (Congruence)	5	2903.71	2.17
AC	15	1485.87	1.11
BC	5	2060.19	1.54
ABC	15	1228.48	0.92
Error C	145	1340.30	

*$p < .05$
**$p < .01$

TABLE 27

ANALYSIS OF VARIANCE

SPRING STUDENT TEACHERS WHO GAINED IN TSRT SCORE WHEN PRE- AND POSTTEST SCORES WERE COMPARED

Source of variation	df	MS	F
Between			
A (Treatment)	3	140.88	0.59
Error A	11	239.38	
Within			
C (Congruence)	5	128.17	0.52
AC	15	335.25	1.35
Error C	55	247.92	

the descriptive data is merely presented in Table 28 and not discussed.

Table 29 presents the analysis of variance for those students who decreased in TSRT score when pre and post tests were compared. In this table Factor C, the change in congruence, produced a significant F. The mean congruence data for this group is presented in Table 30. For the group receiving the combined videotape and Flanders' supervisory techniques, the lowest congruence occurred in the fifth observation of 47.0. The highest congruence occurred in the second observation, 66.42. This group markedly decreased in congruence through the semester.

The group receiving only the videotape feedback for supervision had the lowest mean congruence in the fifth observation, 43.4. The highest was in the fourth observation, 62.5. These data seem to vascillate up and down. The group receiving just the Flanders' Interaction Analysis supervisory technique had the minimum congruence in the second observation of 39.1, the maximum convergence in the third observation of 56.5. The fourth group with no specified supervisory technique had its minimum congruence in the first observation at 39.0, and the maximum in the third observation at 62.5.

Table 31 presents the TSRT descriptive data. These data are broken down into Fall and Spring as well as indicating the mean and standard deviation of the scores for the total group. Group 1, receiving the Flanders' Interaction Analysis and videotape supervisory techniques, had a mean of 210.9 as a pre test, 209.6 as a post test. In the Fall the pre test mean was 210.5, post test mean 209.4. In the Spring pre test mean 211.4, posttest mean 211.0. In each case, the mean on the posttest was less than the mean on the pretest.

Group 2, who received the videotape supervisory technique only, there was a variation in pattern. The total group increased from 206.1 to 207.3 on the posttest. The Fall group increased from 204.8 to 207.3, whereas the Spring group decreased from 206.4 to 205.9. In the group receiving just the Flanders' Interaction Analysis, the overall shift was down from pre-to posttest of 208.7 to 206.7. The Fall group showed an increase in mean score, however, from 206.6 to 208.0. The Spring group showed a decrease from 210.9 to 205.3. For those who were in the non-specified supervisory treatment, the overall performance was an increase in mean score from 208.6 to 212.6. The Fall group decreased, however, in mean performance from 209.8 to 209.0, whereas the Spring group increased in performance from 204.6 to 215.6.

TABLE 28

CONGRUENCE OF SPRING STUDENT TEACHERS WHO GAINED IN TSRT SCORES WHEN PRE- AND POSTTESTS WERE COMPARED

Group	TSRT level	Observation											
		1		2		3		4		5		6	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Increase	59.9	14.71	53.6	12.61	63.2	30.87	45.8	13.53	59.0	24.51	59.9	16.59
2	Increase	64.6	17.04	42.9	22.25	44.2	1.77	45.0	8.96	65.9	5.75	54.4	8.55
3	Increase	40.9	10.30	53.7	9.61	58.3	18.31	63.6	17.37	47.9	14.52	51.2	20.12
4	Increase	54.0	6.10	47.6	15.54	56.1	9.21	76.6	8.13	54.2	17.76	54.3	13.80

TABLE 29

ANALYSIS OF VARIANCE

SPRING STUDENT TEACHERS WHO SCORED LOWER ON POST-TSRT THAN ON PRE-TSRT

Source of variation	df	MS	F
Between			
A (Treatment)	3	456.46	1.11
Error A	18	412.57	
Within			
C (Congruence)	5	675.75	3.20*
AC	15	277.86	1.32
Error C	90	210.95	

*$p < .05$

TABLE 30

CONGRUENCE OF SPRING STUDENT TEACHERS WHO DECREASED ON TSRT SCORES WHEN PRE- AND POSTTESTS WERE COMPARED

Group	TSRT level	Observation											
		1		2		3		4		5		6	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Decrease	56.4	19.45	66.4	8.24	50.6	11.49	62.0	19.31	47.0	16.90	48.3	21.81
2	Decrease	57.9	20.23	49.6	7.32	57.9	15.67	62.5	10.86	43.4	21.18	44.3	14.75
3	Decrease	46.6	16.74	39.1	10.49	56.5	10.78	52.1	17.90	40.2	13.50	45.4	3.11
4	Decrease	39.0	19.71	54.8	10.34	62.5	21.44	61.0	16.00	59.8	18.22	43.9	12.62

TABLE 31

TSRT DESCRIPTIVE DATA

Group	Semester	Pre		Post	
		Mean	S. D.	Mean	S. D.
1	Fall	210.5	14.01	209.4	16.9[illegible]
1	Spring	211.4	6.50	211.0	14.25
1	Total	210.9	12.78	209.6	15.01
2	Fall	204.8	10.16	207.3	9.23
2	Spring	206.4	15.06	205.9	18.48
2	Total	206.1	14.15	207.3	15.33
3	Fall	206.6	11.25	208.0	8.79
3	Spring	210.9	11.60	205.3	9.95
3	Total	208.7	9.38	206.7	9.13
4	Fall	209.8	20.07	209.0	15.26
4	Spring	204.6	12.35	215.6	21.69
4	Total	208.6	16.52	212.6	18.45

Summarizing the data with respect to congruence scores broken down according to TSRT gains or losses, and TSRT scores themselves, while there were significant differences in congruence as the sixth measures were made on the teaching behavior, there was no consistent pattern in congruence in any one of the levels of TSRT performance or in any one of the treatment groups. There was no consistent performance in shift on TSRT in any of the treatment groups. Therefore, the null hypotheses related to any of these considerations cannot be rejected.

MSAI. This section presents the analysis of the data based on the Minnesota Student Attitude Inventory filled out by the student teachers as they perceived their students would actually have filled them out. This will be called the MSAI Real score. These data were also analyzed for the total group and for the Fall and Spring semester groups separately.

Table 32 presents the analysis of variance for the congruence data separated on the MSAI scores above and below the median MSAI Real score for all student teachers in the Continuing Study. In this analysis and the subsequent ones in this section, Factor A is the four treatment groups, treatment one being that group which received both the Flanders' Interaction Analysis technique and the videotape recording. Group 2 received only the videotape recording technique. Group 3 received only the Flanders' Interaction Analysis. Group 4 had no specified supervisory treatment.

In the analysis in Table 32, there was no significant F. Table 33 presents the break-down analysis for those people who scored above the median on the MSAI from the total year of the study. In this analysis there was no significant F. The descriptive congruence data for this group is presented in Table 34.

Table 35 presents the analysis of variance for the subjects in the entire year who scored below the median on the MSAI Real. There were no significant values for F in this analysis. Table 36 presents the data which describes these congruences. Breaking the data down into those who student taught in the Fall and those who student taught in the Spring, Table 27 presents the analysis of variance for all students who taught in the Fall semester of 1968-69, when broken down on the basis of those whose scored above or below the median on the MSAI Real. In this analysis, Factor B, the levels of MSAI was significant and Factor C, the repeated congruence measure within the group, was also significant.

Table 38 shows the analysis of variance on those students in the Fall who scored above the median on the MSAI. In this

TABLE 32

ANALYSIS OF VARIANCE

TREATMENT BY MSAI (REAL) BY CONGRUENCE

ALL STUDENT TEACHERS STUDIED

Source of variation	df	MS	F
Between			
A (Treatment)	3	378.33	0.43
B (MSAI)	1	3229.00	3.64
AB	3	1000.33	1.13
Error AB	62	887.05	
Within			
C (Congruence)	5	1673.00	1.97
AC	15	686.80	0.81
BC	5	359.60	0.42
ABC	15	1030.93	1.21
Error C	310	850.51	

TABLE 33

ANALYSIS OF VARIANCE

ALL STUDENT TEACHERS STUDIED WHO SCORED ABOVE THE MEDIAN ON MSAI (REAL)

Source of variation	df	MS	F
Between			
A (Treatment)	3	455.04	1.38
Error A	29	329.60	
Within			
C (Congruence)	5	276.94	1.10
AC	15	157.74	0.63
Error C	145	252.37	

TABLE 34

CONGRUENCE OF STUDENT TEACHERS WHO SCORED ABOVE THE MEDIAN ON MSAI (REAL)

Group	MSAI level	Observation											
		1		2		3		4		5		6	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Above	53.7	22.84	57.2	11.22	59.4	23.81	57.3	13.63	50.4	9.84	55.1	15.77
2	Above	46.0	18.47	50.7	14.82	45.9	20.19	49.5	16.34	52.3	18.69	52.6	11.78
3	Above	51.9	16.02	48.3	10.81	50.6	12.26	63.5	13.87	55.1	10.20	56.8	14.22
4	Above	44.9	19.51	51.6	11.11	62.4	22.11	62.8	16.57	56.8	14.34	53.1	16.83

TABLE 35

ANALYSIS OF VARIANCE

ALL STUDENT TEACHERS STUDIED WHO SCORED BELOW THE MEDIAN ON MSAI (REAL)

Source of variation	df	MS	F
Between			
A (Treatment)	3	187.44	0.86
Error A	33	218.72	
Within			
C (Congruence)	5	434.44	1.84
AC	15	279.60	1.18
Error C	165	236.44	

TABLE 36

CONGRUENCE OF STUDENT TEACHERS WHO SCORED BELOW THE MEDIAN ON THE MSAI (REAL)

Group	MSAI level	Observation											
		1		2		3		4		5		6	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Below	43.3	12.38	55.8	14.25	50.5	11.69	47.0	19.29	52.0	18.27	58.3	16.62
2	Below	49.8	24.45	46.9	13.18	52.1	10.96	52.3	10.34	63.1	9.74	46.5	9.72
3	Below	42.9	13.95	46.0	14.32	56.2	14.47	46.1	17.69	44.8	16.96	52.3	15.28
4	Below	43.1	16.70	47.2	12.12	55.8	17.47	60.2	17.98	56.7	14.71	47.0	13.64

TABLE 37

ANALYSIS OF VARIANCE

TREATMENT BY MSAI (REAL) BY CONGRUENCE

FALL STUDENT TEACHERS

Source of variation	df	MS	F
Between			
A (Treatment)	3	152.02	0.85
B (MSAI)	1	2168.44	12.16**
AB	3	168.31	0.94
Error AB	25	178.33	
Within			
C (Congruence)	5	1063.29	5.25**
AC	15	184.13	0.91
BC	5	367.94	1.82
ABC	15	304.38	1.50
Error C	125	202.40	

**$p < .01$

TABLE 38

ANALYSIS OF VARIANCE

FALL STUDENT TEACHERS SCORING ABOVE THE MEDIAN ON MSAI (REAL)

Source of variation	df	MS	F
Between			
A (Treatment)	3	508.79	4.02*
Error A	11	126.61	
Within			
C (Congruence)	5	200.67	0.81
AC	15	323.52	1.30
Error C	55	248.57	

*$p < .05$

analysis, Factor A or the treatments themselves, produced a significant F. No other factor or interaction showed significance.

Table 39 presents the congruence data for these subjects. In the first treatment group, the minimum mean of congruence was 43.4, the maximum was 62.2. These were achieved in the first and third observations respectively. The second treatment group, receiving only videotape as a supervisory technique, had minimum congruence of 36.0 and maximum congruence at 60.0. These were achieved in the third and fifth observation.

The third treatment group receiving Flanders' Interaction Analysis treatment, had minimum congruence in the second observation of 39.9 and a maximum congruence in the fourth observation of 67.3. The group with unspecified treatment had minimum congruence in the second observation of 47.6 and maximum in third observation of 60.15. The highest congruence was achieved by those in the interaction analysis only group. The second highest was achieved by those in the combined interaction analysis and videotape group. There was little observable difference in congruence performance between those who received videotape only feedback and those who had an unspecified treatment for supervisory techniques.

The analysis of variance for the Fall student teachers who scored below the median on the MSAI is presented in Table 40. None of the factors or interactions was significant except for C, the shift in congruence within the groups. The descriptive data for these subjects is included in Table 41.

For the subjects in the first group who received a combination of both the videotape and the Flanders' Interaction Analysis, the minimum mean congruence occurred in the first observation, 38.3. The maximum occurred in the sixth observation, 64.7. In the group receiving only the videotape supervision, the minimum mean congruence was 35.4 in the first observation and the maximum, 61.9, was in the fifth observation. In the group receiving only the Flanders', the minimum congruence was in the fourth observation at 34.2 and the maximum occurred in the sixth observation at 66.0.

In the fourth treatment group, those with no specified supervisory technique, the minimum congruence of 27.5 occurred in the first observation and the maximum of 60.0 occurred in the last or sixth observation.

Students in the Fall sample who scored below the median on the MSAI Real showed a definite increase in congruence as the semester proceeded through the six observations. Each of the four groups showed the same basic pattern except for the

TABLE 39

CONGRUENCE OF FALL STUDENT TEACHERS WHO SCORED ABOVE THE MEDIAN ON MSAI (REAL)

Group	MSAI level	Observation											
		1		2		3		4		5		6	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Above	43.4	18.24	63.6	4.87	62.2	4.79	58.7	11.16	55.0	11.52	46.0	10.82
2	Above	36.3	13.72	55.8	14.31	36.0	19.69	37.3	9.67	60.0	11.01	54.2	11.57
3	Above	59.5	23.01	39.9	5.45	55.9	15.96	67.3	2.41	60.4	12.02	59.8	21.79
4	Above	50.9	19.55	47.6	6.37	60.1	28.71	54.2	18.73	55.0	5.48	50.7	20.66

TABLE 40

ANALYSIS OF VARIANCE

FALL STUDENT TEACHERS SCORING BELOW THE MEDIAN ON MSAI (REAL)

Source of variation	df	MS	F
Between			
A (Treatment)	3	79.69	0.36
Error A	14	219.06	
Within			
C (Congruence)	5	1144.72	6.89**
AC	15	193.61	1.17
Error C	70	166.12	

**p $<$.01

TABLE 41

CONGRUENCE OF FALL STUDENT TEACHERS WHO SCORED BELOW THE MEDIAN ON MSAI (REAL)

Group	MSAI level	Observation											
		1		2		3		4		5		6	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Below	38.3	15.79	49.3	13.23	48.5	15.53	45.9	19.41	47.8	7.43	64.7	10.61
2	Below	35.4	17.84	49.3	16.76	52.6	13.35	54.5	8.40	61.9	12.17	52.4	11.00
3	Below	42.8	7.25	57.3	13.59	44.0	10.01	34.2	8.28	55.0	16.51	66.0	3.52
4	Below	27.5	3.99	36.7	9.28	49.3	15.80	47.4	15.02	54.5	5.64	60.0	16.92

interaction analysis only treatment group which first went down in congruence and then produced higher values.

Table 42 presents the analysis of variance table for those student teachers assigned in the Spring semester of the 1968-69 school year, with B Factor being the scoring above or below the median on the MSAI. None of these values of F was significant, therefore, no analysis of variance was performed breaking these data into separate levels of Factor B.

Table 43 and Table 44 present the descriptive data for those student teachers in this classification.

Table 45 presents the descriptive data for the Minnesota Student Attitude Inventory comparing the Real, which was the version filled out by the student teacher as he perceived his students would have filled it out, and the Ideal, which was the student teachers' filling out the MSAI in the way he would like to have had his students fill it out.

There were marked differences between MSAI (Real) and MSAI (Ideal) scores in all treatment groups whether grouped by fall, spring, or total. There were no large differences among the treatment groups on either the real or ideal administrations; therefore, no analysis of variance was performed on these data. The least difference between Real and Ideal versions occurred in the group with no specified supervisory treatment. This group also produced the lowest MSAI (Ideal) scores. The student teachers in the interaction analysis group with student teaching assignments in the spring semester produced a distribution of MSAI (Ideal) scores with a much smaller standard deviation than that produced by any other group.

Student MSAI Scores. The Minnesota Student Attitude Inventory was administered as an optional item to students of the student teachers who were participants in this study. There were students of student teachers in each experimental group who completed the instrument. In Table 46 there are the means and standard deviations of the student MSAI scores grouped by treatment group and by semester. In the Fall semester the group with the lowest mean score on the MSAI was the first treatment group, those students receiving both Flanders' and videotape as feedback and supervisory treatments. Those students who produced the highest MSAI scores occurred in the group for which were student teachers who had no specified supervisory technique.

In the spring a different pattern prevailed. The lowest scores on the MSAI were produced by students of student

TABLE 42

ANALYSIS OF VARIANCE

TREATMENT BY MSAI (REAL) BY CONGRUENCE

SPRING STUDENT TEACHERS

Source of variation	df	MS	F
Between			
A (Treatment)	3	1803.35	1.39
B (MSAI)	1	1318.19	1.02
AB	3	3030.98	2.33
ERAB	29	1298.37	
Within			
C (Congruence)	5	2903.63	2.30
AC	15	1485.88	1.18
BC	5	1271.27	1.01
ABC	15	2244.55	1.78
Error C	145	1262.39	

TABLE 43

CONGRUENCE OF SPRING STUDENT TEACHERS WHO SCORED ABOVE THE MEDIAN ON MSAI (REAL)

Group	MSAI level	Observation											
		1		2		3		4		5		6	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Above	63.9	17.02	56.0	13.71	64.5	25.23	62.1	13.64	49.5	11.90	58.9	17.19
2	Above	55.8	18.47	45.7	15.00	55.8	16.84	61.7	11.66	44.5	22.72	50.9	13.10
3	Above	38.7	16.79	51.7	14.16	49.0	11.65	47.4	14.21	46.9	12.63	21.00	11.05
4	Above	38.9	20.27	55.7	14.24	64.6	17.40	71.4	9.52	58.6	21.00	55.6	14.76

TABLE 44

CONGRUENCE OF SPRING STUDENT TEACHERS WHO SCORED BELOW THE MEDIAN ON MSAI (REAL)

Group	MSAI level	Observation											
		1		2		3		4		5		6	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	Below	48.5	10.18	66.7	4.82	44.2	11.34	40.3	16.62	58.9	33.28	46.1	22.70
2	Below	68.1	18.05	49.3	13.48	47.8	6.69	46.3	10.52	63.9	4.63	43.4	14.41
3	Below	48.0	12.17	40.4	9.34	62.7	12.16	62.9	18.10	40.8	14.96	44.5	12.78
4	Below	47.6	16.26	50.1	11.60	57.6	18.64	63.9	17.97	57.3	16.77	43.2	11.23

TABLE 45

MSAI REAL AND IDEAL

DESCRIPTIVE DATA

Group	Semester	Real		Ideal	
		Mean	S. D.	Mean	S. D.
1	Fall	85.9	11.45	112.6	5.17
1	Spring	89.3	15.21	111.3	4.20
1	Total	87.5	13.02	111.4	4.75
2	Fall	88.0	12.12	113.6	7.55
2	Spring	93.3	8.75	112.1	6.09
2	Total	90.1	10.89	113.5	5.64
3	Fall	88.4	10.93	111.9	7.01
3	Spring	90.6	7.47	112.8	2.90
3	Total	89.6	8.88	112.6	5.94
4	Fall	91.0	7.27	107.7	5.61
4	Spring	82.0	12.73	106.0	6.32
4	Total	85.8	11.36	106.5	6.00

TABLE 46

STUDENT MSAI
OF FALL AND SPRING STUDENT TEACHERS
MEANS AND STANDARD DEVIATIONS

Group	Semester	Mean	S. D.
1	Fall	86.3	14.53
1	Spring	88.4	17.29
2	Fall	87.7	15.03
2	Spring	73.1	18.53
3	Fall	95.4	15.96
3	Spring	76.9	20.73
4	Fall	98.9	12.24
4	Spring	76.1	22.58

TABLE 47

WORKSHOP ASSESSMENT INDEX
MASTER TEACHERS' MEAN SCORES

Group	Semester	Utility	Frequency
1	Fall	46	40
1	Spring	50	46
2	Fall	46	39
2	Spring	50	48
3	Fall	47	35
3	Spring	49	42

teachers who were supervised using the videotape only as a supervisory technique and the highest scores were produced by those students of student teachers who received both Flanders' Interaction Analysis and videotape as supervisory techniques.

Workshop Assessment Index Scores. Master teachers who were in the Summer Workshop filled out Workshop Assessment Index forms at the close of the Workshop. These scores are presented in Table 47 in the form of means for utility and means for frequency of use divided into the four treatment groups and into the two semesters. The range on utility across all six of the groups was 46 to 50. The range on frequency was 35 to 48. On frequency the lowest reported mean was from the master teachers of all semester student teachers who received only the Flanders' supervisory technique and the highest frequency was reported by the Workshop teachers who had student teachers assigned in the Spring semester. Those teachers reported a mean frequency of 48.

Supervisory Activities Checklist. The Supervisory Activities Checklist was administered both to student teachers and to master teachers in all four experimental groups in both semesters. Table 48 presents the frequency of use of supervisory techniques as reported on that instrument. It is divided into Fall and Spring semesters and into the four treatment groups, then into the student teachers and master teachers from each of those treatment groups. It reports on each item on the Checklist. Items 11 and 12 are concerned with the use of the videotape equipment. In Groups 1 and 2, where that equipment was directed to be used, it was reported to be used by all of the student teachers and all but one set of master teachers. In Groups 3 and 4, which were not to use the videotape recorder, no one in the Fall semester reported its use. However, in the Spring semester, three student teachers and two cooperating teachers reported using videotape equipment.

Items 13 through 17 concerned the use of the Flanders' Interaction Analysis technique. In Groups 1 and 3, which are concerned with various aspects of using Flanders' technique, each student teacher and cooperating teacher report having actually used this technique. In Groups 2 and 4, where this was not specified, only one student teacher reported using this technique and two master teachers reported using it. In the Spring semester, concerned with the same items, Groups 1 and 3 again report heavy use of interaction analysis. In Group 2, at least two student teachers and one cooperating teacher report actually using the Flanders' technique. In Group 4 no student teacher reports the use of this technique, but at least four of the master teachers claim that they have made use of Flanders. Almost every other item was claimed to

TABLE 48

FREQUENCY OF USE OF SUPERVISORY TECHNIQUES

Item	Fall semester								Spring semester							
	Experimental group								Experimental group							
	I		II		III		IV		I		II		III		IV	
	st	ct	st	ct	st	ct	st	ct	st	ct	st	ct	st	ct	st	ct
1	2	7	6	11	4	6	8	8	5	10	2	11	3	12	3	16
2	4	8	11	8	5	7	8	5	5	9	6	8	8	10	4	5
3	5	7	8	10	9	5	7	8	9	10	5	15	9	11	2	15
4	6	5	4	7	4	7	6	2	5	6	2	7	2	6	2	9
5	3	4	7	6	10	5	8	6	5	4	2	5	7	4	7	10
6	1	11	3	1	14	1	0	2	2	3	2	3	1	2	1	3
7	12	10	13	12	6	7	8	3	8	10	9	16	7	7	7	9
8	13	8	13	10	11	5	9	5	11	9	8	13	12	8	14	19
9	13	9	11	6	12	7	8	9	10	10	5	14	12	14	14	19
10	0	13	3	9	0	1	3	0	2	4	1	2	0	2	2	4
11	6	8	13	3	0	0	0	0	7	7	4	6	3	1	1	1
12	6	6	3	0	0	0	0	0	2	3	2	5	2	1	0	2
13	9	8	0	0	6	9	0	0	7	9	1	1	10	11	0	4
14	7	4	0	0	4	6	0	0	4	4	1	0	10	4	0	0
15	5	8	1	0	4	4	0	2	5	3	2	1	4	8	0	1
16	4	6	0	0	1	5	0	1	3	5	0	0	8	10	0	3
17	5	10	0	0	0	3	0	0	3	3	0	0	7	5	0	0
18	6	5	3	2	1	3	0	1	3	4	1	1	3	3	0	2
19	7	6	0	0	1	3	0	0	1	4	0	0	4	6	0	2
20	3	4	2	5	0	5	0	7	1	6	0	1	4	5	0	7
21	5	6	4	5	4	7	1	5	7	7	2	3	6	9	6	10
22	13	8	14	12	9	7	5	7	10	9	4	10	6	12	7	11
N	9	7	10	8	7	6	6	6	8	8	7	8	9	9	8	12

have been used by master teachers and student teachers in all four groups in both semesters.

Semantic Differential. The Semantic Differential was administered to Workshop cooperating teachers at the beginning and again at the end of their Workshop experience. This same instrument was administered to the student teachers in all four treatment groups. The Semantic Differential contained pairs of adjectives related to three factors; effectivity, potency and receptivity, for each of the twelve concepts given in the instrument.

Tables 49, 50 and 51 present the total shift in those factors on the concepts of the Semantic Differential instrument. These totals were equalized so that the effect of different sized groups would be eliminated from the table.

Table 52 presents the frequency of positive shifts on the Semantic Differential concepts by cooperating teachers. These are presented separately by Fall and Spring and then combined so that a chi-square analysis could be run on these data. The chi-square for effectivity across the three groups of cooperating teachers, was 1.61 which gives a probability less than .50 that these occurred by chance. On potency, the chi-square value was 1.63, the probability was less than .50. For receptivity, the chi-square value was .45 giving a probability of less than .80. Each of these probabilities is considerably less than that which is acceptable for saying one has a significant difference. Therefore, it is assumed that the Semantic Differential did not indicate any significant differences among the three groups of cooperating teachers on the concepts listed in that instrument.

Table 53 presents the frequency of positive shifts on Semantic Differential concepts by student teachers. In this case, the four treatment groups are presented, separated by Fall and Spring, and combined for purposes of analysis on each of the factors. On effectivity, the chi-square value was 6.81, probability less than .10. For potency, chi-square value was 3.58, probability less than .50. For receptivity, the chi-square value was 2.16, the probability less than .70. Only the factor effectivity showed anything approaching significant differences among the four treatment groups. These differences were less than would be required to produce a probability of less than .05 (the level accepted in the rest of this document), yet the differences were marked and approached significance. On the effectivity factor those students in Group 2, the group who received videotape feedback as a supervisory technique, had more positive shifts than any of the other groups.

TABLE 49

TOTAL SHIFT IN EFFECTIVITY ON CONCEPTS IN SEMANTIC DIFFERENTIAL INSTRUMENT

Item	I				II				III				IV	
	Fall		Spring		Fall		Spring		Fall		Spring		Fall	Spring
	st	ct	st	ct	st	ct	st	ct	st	ct	st	ct	st	st
1	+8	+5	-1	-5	-7	+4	+13	+5	-1	-3	+11	+4	+1	-1
2	0	+8	+9	-2	+2	+2	+4	+3	-5	+2	+6	0	-5	+3
3	+11	-7	-5	-4	-11	-4	+6	+8	-15	+1	-3	+7	-4	-2
4	-11	+6	-16	-3	+6	-3	+16	+1	-2	+4	-9	+2	-4	+2
5	+9	+1	-1	-4	-9	-16	+17	-1	+2	-3	-6	+2	-8	+3
6	-5	-4	-22	-3	+19	-12	+8	+3	+1	-5	+14	-2	-4	-13
7	+1	+10	+15	-3	+8	+1	+8	+5	-2	+8	+4	+3	-1	+3
8	-4	+16	-1	-11	+5	-14	-24	+1	-6	+35	-11	+7	-6	-20
9	-7	+2	+9	-5	-6	+4	+11	-5	-2	+12	-2	+2	-3	-7
10	+8	-13	-18	+1	+7	-8	+13	-8	+7	-2	+7	-1	-12	-3
11	-2	-23	-26	-5	-6	-12	+8	-29	+3	-33	+3	-31	-7	+1
12	-2	-5	-13	-2	+1	+12	+17	-17	-10	+4	-1	+1	-5	+1

TABLE 50

TOTAL SHIFT IN POTENCY ON CONCEPTS IN SEMANTIC DIFFERENTIAL INSTRUMENT

Item	I				II				III				IV	
	Fall		Spring		Fall		Spring		Fall		Spring		Fall	Spring
	st	ct	st	ct	st	ct	st	ct	st	ct	st	ct	st	st
1	+1	0	+7	-1	+3	+4	-1	-1	-8	+1	+5	-2	+1	+3
2	-7	+9	-10	-2	+1	+5	-8	+4	-3	+2	-2	-8	-3	+4
3	+2	-1	-5	-2	+1	-4	-3	+2	-8	+3	-3	-7	+1	+1
4	-7	+10	+3	+1	-3	-5	+9	+2	-11	+4	-13	+9	-3	+3
5	+6	-1	-5	0	+11	-10	+8	-13	+18	-4	0	+2	-1	-1
6	+1	+11	0	-2	+12	-11	-4	-6	-9	+5	-2	+1	+3	+3
7	-9	+12	+7	+2	+1	-2	+4	+10	+5	+2	-10	+6	-2	+9
8	-10	+3	-1	0	+17	-7	+10	+15	-12	+13	-19	+7	-4	-5
9	+13	-3	-3	-1	+11	+10	+4	+6	+2	+7	-7	+3	-3	-4
10	+10	-4	+8	+1	+8	-1	-9	-2	+4	+1	-7	-3	0	-2
11	-3	-13	-10	-1	+1	-5	+3	-11	+12	-4	+5	-16	-8	+7
12	-1	-1	+1	-1	+6	-2	-1	-9	-4	+2	+7	-2	-4	+8

TABLE 51

TOTAL SHIFT IN RECEPTIVITY ON CONCEPTS IN SEMANTIC DIFFERENTIAL INSTRUMENT

Item	I				II				III				IV	
	Fall		Spring		Fall		Spring		Fall		Spring		Fall	Spring
	st	ct	st	ct	st	ct	st	ct	st	ct	st	ct	st	st
1	+5	+12	-5	-1	-5	+5	+16	-9	+19	+9	-11	+6	+2	+2
2	-3	+10	+3	+1	+6	-9	+11	-5	+13	+4	-1	-1	-5	+12
3	+3	-5	-7	0	+2	+7	+15	+12	-8	+2	-19	+3	+2	-6
4	-5	-3	-3	-3	-3	0	+7	+2	+7	-7	-10	+1	-2	+4
5	+2	+8	-29	+5	-25	-1	+12	-1	+7	+5	-6	-3	0	-9
6	+25	+11	-1	0	-24	-12	-4	+8	+31	+7	0	+5	-12	-9
7	+16	+6	+14	-1	+11	+6	+14	+8	-8	+17	+3	+2	+2	+6
8	+8	+7	+6	-2	+3	-8	-6	+3	0	-6	0	-3	-2	-14
9	+3	-12	+1	-3	-5	+3	-2	+2	+1	+11	+1	-1	+4	-4
10	+10	-4	-3	-2	+11	-8	+13	-14	-1	-2	-8	0	+1	-8
11	+4	+11	+2	-5	+7	-7	-5	-22	+7	-10	0	-4	+4	-2
12	+2	+2	-15	-5	-3	+4	+12	-9	0	+2	-12	0	-5	-1

TABLE 52

FREQUENCY OF POSITIVE SHIFTS
SEMANTIC DIFFERENTIAL CONCEPTS
BY COOPERATING TEACHERS

Factor	Semester	Treatment group			Chi square
		I	II	III	
Effectivity	Fall	7	5	7	
	Spring	2	7	8	
	Total	9	12	15	$X^2=1.61 (p<.50)$
Potency	Fall	5	3	10	
	Spring	3	6	6	
	Total	8	9	16	$X^2=1.63 (p<.50)$
Receptivity	Fall	8	5	8	
	Spring	2	6	5	
	Total	10	11	13	$X^2=0.45 (p<.80)$

TABLE 53

FREQUENCY OF POSITIVE SHIFTS
SEMANTIC DIFFERENTIAL CONCEPTS
BY STUDENT TEACHERS

Factor	Semester	Treatment group				Chi square
		I	II	III	IV	
Effectivity	Fall	5	7	4	1	
	Spring	3	11	6	6	
	Total	8	18	10	7	$X^2=6.81 (p<.10)$
Potency	Fall	6	11	5	3	
	Spring	5	6	3	8	
	Total	11	17	8	11	$X^2=3.58 (p<.50)$
Receptivity	Fall	10	6	7	6	
	Spring	5	8	2	4	
	Total	15	14	9	10	$X^2=2.16 (p<.70)$

Summary. When student teachers were divided within treatments into groups who gained or lost in TSRT scores when pre- and posttests were compared, there were significant differences only on the within-group congruence across the repeated measuring of that variable. There was no pattern to this congruence although higher congruences were generally attained in the later observations.

When student teachers were categorized within treatment groups by MSAI (Real) scores above or below the median for all participants, only the fall student teachers showed significant differences. Utilizing both levels of MSAI (Real) performance, there were significant between-group differences in the MSAI (Real) levels and significant differences in within-group congruence across the six observations. Student teachers scoring above the median on the MSAI (Real) were significantly different in treatment effect. The highest congruence was achieved by those in the interaction analysis group. The second-highest congruence was achieved by the combined videotape and interaction-analysis group. There was little observable difference in congruence between the two lowest groups, the videotape only, and the comparison groups.

The largest difference between the MSAI (Real) scores produced by the student teachers and the MSAI scores produced by the students of those student teachers occurred in the interaction-analysis group assigned in the spring semester. Generally the MSAI (Real) scores were similar to those produced by the students.

The Workshop Assessment Index (end of Workshop) showed no marked differences among cooperating teachers assigned to use the three prescribed supervisory programs. The Supervisory Activities Checklist provided evidence that the different treatment conditions actually prevailed.

The Semantic Differential Instrument indicated strong shifts ($p < .10$) among the four treatment groups of student teachers on the effectivity factor. Those student teachers who were given videotape-only feedback produced the highest number of positive shifts. The lowest number of positive shifts occurred in the no-specified-treatment group.

DISCUSSION

Interpretation of findings

This section deals with the results of both studies by drawing inferences from the statistical findings, speculating about their meanings and indicating possible interpretations.

A tremendous amount of data has been collected over the two-year period. This report deals with those data as grouped data subjected to finite statistical treatment. By design, such treatment precludes other possible groupings of data for analysis. It necessarily limits or suppresses information about individual cases and the dynamics of behavior change in student teaching.

However, the statistical treatment exposes areas that are worth further investigation on a re-grouped, individualistic or more dynamic basis. It is anticipated that continued study of these data will delineate some of the relationships that are hinted at, but not demonstrated, in the statistical analysis.

It is recognized that student teaching and its supervision occur in a bafflingly extensive complex of variables that can confound those variables selected for analysis in this study. Even though the "chance" assumptions of a statistical study have definite theoretical and practical value, some aspects of those "chances" have, in reality, more dynamic cogency than can be adequately demonstrated in the scope of this study.

The particular school in a particular city at a particular time--the specific cooperating teacher and student teacher and their specific potentials for interaction--the individual student, the individual student teacher, the particular classroom situation--these and many other aspects in interaction provide an unanalyzed context in which these findings must be considered.

The Pilot Study. It is clear in the Pilot Study findings that the main effect, the positive relationship between specific training of the cooperating teacher and the recorded performance of the student teacher, was not demonstrated.

However, some somewhat more subtle, expected and unexpected, relationships were demonstrated, at least in terms of statistical significance.

1. The major finding is that, irrespective of treatment and other variables, all groups changed significantly from measure to measure in congruence of prediction and actual observed performance in classroom instructional behavior. The

general trend was an increasing convergence (even though not consistently increasing sequentially from measure to measure).

Somehow or other, in the conditions of this study, the experience of student teaching permitted students to demonstrate that their instructional behavior became more congruent with their prediction of that behavior. Whether this is a function of improved prediction of perceived reality or of improved control of instructional behavior, or of a better match between both phenomena, the study did not explicate.

The "implications" section below will speculate further upon this question.

2. A second finding is that the TSRT instrument had some significant relationships with the degree of congruence of intent (prediction data) and performance (observation data).

In general, those students who increased in pre-to-post TSRT scores showed a greater increasing congruence than those who decreased in TSRT scores.

No prediction of congruence was possible from initial TSRT scores. However, inspection of the data shows that in most cases the post TSRT showed a decrease in scores as compared to the pretest. The one exception is in Group A (Workshop supervision on full semester assignment) where an equal number of students increased or decreased. This may indicate that there is some efficacy in continued consistent supervision as compared to more varied experience.

3. The interrelationships of three types of administrations of the MSAI produced some significant findings.

By and large, student teachers' estimates of how their students perceived them were very close to the actual ratings by students. This finding must be accepted very cautiously since many classes did not fill out the instrument and the data are thus derived from an incomplete sample biased in unknown ways.

The mean of students in all groups showed that their desired rating on the MSAI (Ideal) was significantly higher than their estimates of student perceptions (Real). This may be interpreted to say that student teachers wanted to do better in the eyes of their students than they actually thought they had done.

The only other difference (consistent but not statistically significant) in the MSAI was that classes who rated student teachers at the end of the first quarter rated them higher than those who rated their student teachers for the second quarter. In contrast, the ratings of those who had the same student teacher for the full semester gave a mean rating falling between those of the first and second quarter.

Again this is the incomplete and biased sample, and any interpretation is suspect. However it is another bit of information which raises the question of the value of full semester placement in student teaching.

4. Using the Semantic Differential as a measure of attitude toward teaching and selected aspects of it, there was a general shift in a negative direction from thebeginning to the end of student teaching.

There were interesting variations from group to group and from section to section of the instrument. Interpretively, no pattern has been found to clarify the meaning of these differences.

5. The Workshop Activities Assessment Index was designed to get some information about the expectations of Workshop participants as to the value of specific supervisory practices and the frequency with which they expected to employ them. Some rather fine discrimination among practices were called for.

These discriminations are completely destroyed in the summing of the rankings for statistical purposes. The statistical treatment simply sums the weight of all ranks for frequency and similarly for value, and makes no distinction for alternative choice possibilities. It is, therefore, a gross measure of anticipations of value and frequency.

It is clear that teachers in all groups perceived themselves as having utilized the summed techniques less frequently than they had anticipated and perceived them as being less valuable than they had hoped.

Similarly, when students were asked to indicate the practices that had been used by their cooperating teachers, they perceived them as using those practices on the Index even less frequently and with less value.

Interpretations of these findings lie in the actual conditions of student teaching in the real world of the school. Cooperating teachers found themselves with insufficient time for the kind of supervisory activities they wished to engage in. The pressure of teaching and other responsibilities eroded their good intentions.

Similarly, the pressures on student teachers and their anxiety about the many variables in the student teaching situation caused them to attend less to subtle differences in supervisory behaviors.

The question is raised in these findings about the carry over and continuation value of a training design, however good it may be, if the conditions for its application are not carefully structured, monitored and maintained. The question is also raised about the possible value of concurrent supportive in-service activities as a necessary part of the training design.

Continuing Study. In most respects, the pattern of the findings from the continuing study was similar to that found in the pilot study. The following points emphasize the major differences.

1. While the general trend of congruence was from low congruence to high congruence, and while these congruence measures were significantly different within groups in most analyses, there were many instances in which the congruence vacillated considerably. This could have been caused by the varying density of specified treatments in the course of the student-teaching experience. If a videotape had just been recorded or an interaction-analysis matrix compiled just before the research observation, that observation would record prediction and actual behavior more strongly influenced by the treatment.

2. Student teachers who scored above the median on the MSAI (Real) and who taught in the Fall semester produced significantly different between-group congruences. The group receiving the interaction analysis feedback produced the highest convergence. The second highest congruence was produced by the combined interaction-analysis-and-videotape-feedback group. The videotape-only-feedback group produced congruences similar to the no-specified-feedback group. Seemingly the interaction analysis provided student teachers who perceived themselves as being ranked high by students with analytic skills producing higher congruence. Videotape feedback did not seem to influence this skill measurably.

3. The Supervisory Activities Checklist demonstrated that the prescribed treatment conditions had indeed existed. This instrument did not gather data on the extent to which any supervisory technique was used. The physical assignment of the videotape apparatus makes it possible to ascertain that no student teacher could have utilized this feedback system for more than 5 per cent of the student teaching experience. No similar information can be obtained for the interaction analysis usage.

4. The semantic-differential data indicated considerable

shift in attitude among the student and cooperating teachers. While there were more shifts in the negative direction than shifts in the positive direction, those shifts were distributed throughout all treatments with one exception. While not significantly different, videotape feedback student teachers had markedly more positive shifts than did the other treatment groups. This would suggest that the videotape feedback may have more affective influence.

5. Generally, student teachers who were assigned in the Fall semester showed more measured behavioral change than those assigned in the Spring. While no evidence was collected to enable analysis of this phenomenon, it might be speculated that time intervening between the Workshop and the assignment of a student teacher may have diluted the effect of this activity. Of course, the season itself or the availability of student teachers for assignment in a particular semester may have been influential.

In summary, while overall data analysis did not support the hypotheses, some portions of the student-teacher population studied produced differential behavioral changes. In the pilot study, certain student teachers defined by TSRT scores and by full semester assignment showed influence of the supervisory techniques. In the continuing study, student-teachers who scored above the median demonstrated differential effects of the feedback although these effects did not occur in the predicted order.

Implications and Recommendations

Implications. Since the findings of the Pilot Study and the Continuing Study are relatively consistent, their credibility is increased. The fact that the over-all relationship between supervisor training and student teacher performance on the instruments of the study was not demonstrated, and that more subtle relationships were demonstrated, once again illustrates the complex nature of the variables in student teaching.

The methodology and instrumentation of the studies perhaps carry more important implications than the findings themselves. It has been demonstrated that the instruments as used can provide a handle for describing and analyzing some of the aspects of student teaching and supervision and their relationships.

The major measure of the study grew out of the notion of "congruence." For decades, defensible and measurable criteria of teacher effectiveness or teaching effectiveness have eluded educational researchers. Many reasons for this are apparent and will not be elaborated here. It is generally agreed that the most desirable, but also most elusive, criteria are those related to the end product--learning by children. In any naturalistic setting, such as student teaching, such measures are virtually impossible espectially over a relatively short period of time.

For these studies, it was decided to use a process variable, rather than a product variable. Viewing instruction as an influence process, and viewing the teacher as influencing the behavior of students by the control he exerts over his own behavior, the investigators reasoned that a useful criterion would be the degree to which the teacher used the instructional behavior he intended to use. Thus they sought a way to measure the congruence of intent and action in classroom instructional settings.

Among the possible ways to measure congruence it was decided to use systematic observations of student teachers in action combined with prior interviews to determine the student teacher's intended instructional behavior. Put another way, the student teacher was asked to predict his behavior and then observed to determine his actual behavior.

The studies have demonstrated that such a criterion and its measure are viable. Observers can be trained in a complex observational system to categorize and record instructional behavior with a high degree of reliability. Congruence as defined has proved useful for the purposes of these studies.

The data on congruence collected in this study provide a rich deposit which could be mined in many ways. For statistical convenience a simple measure of percent of actual tallies falling in predicted cells was used in these studies. For additional analysis or to seek more complex relationships, other methods could be used. For example:

> The predictions in both the Pilot and the Continuing Studies were actually taken in a manner which permitted the observers to report the relative weight distribution of predicted behaviors as well as simply to delineate types of predicted behaviors. Thus, data are available in which prediction matrix zones are designated as "heavy" and "light" in the Pilot Study, and prediction matrix cells designated as "heavy," "medium," and "light" in the Continuing Study, according to how much of each lesson was predicted to have been characterized by behaviors so labeled. It would be interesting to know what sorts of convergence statis-

tics would show up were these weighted approximations to be utilized. In addition, Pilot Study data are available in which specifically predicted zones are tallied together, which, if analyzed, would give a portrait of the kinds of interaction predicted by different groups. If compared with a refined analysis of the actual teaching data, a still more sophisticated set of convergence statistics would be possible.

Instructional analysis data and congruence data could be analyzed in a number of non-statistical ways. Do certain specific strategies lend themselves to greater congruence than others? In some cases is lack of congruence desirable? In selected individual cases, what are the relationships between these data and other measures of the study?

The other instruments of the study have demonstrated potential usefulness. Continued accumulation of studies using the TSRT is justified by the findings.

The Semantic Differential on concepts in teaching has proved useful. The disparity of results in the Pilot Study and the Continuing Study require further explanation. The investigators have a hunch that the very length of the instrument used in the Pilot Study mitigated against positive attitudes. Its novelty value in the initial administration may have overcome this aspect, while the final administration at the end of a rough semester could enhance the negative. At any rate, there is internal evidence that the shorter form used in the Continuing Study has continuing value in research in teaching.

The MSAI proved questionable for use with children in the conditions of these studies. However, its use as a self report of perceptions in the Real-Ideal dimensions proved valuable.

Speculation about the implications of the findings raises more questions than it answers.

It is clear that there was an increase of congruence between stated intent and instructional performance over the period of student teaching. The reason for this is not clear. Was it a function of adaptation to the student teaching experience itself? Did the intervention of the interviewer-observers provide an attention and practice effect that caused student teachers to change in ways that would not otherwise have occurred? There is some slight evidence that for definable sub-groups of student teachers, particular supervisory activities were related to positive changes.

This increase in congruence, though significant, was not dramatic. The overall mean of congruence was approximately fifty percent. Thus, typically, as much unpredicted as predicted behavior occurred.

The general tendency to decrease in TSRT scores and to vary in both directions on the Semantic Differential requires further analysis, especially in regard to relationships among these shifts in individual cases.

The fact that cooperating teachers used specified supervisory techniques less frequently and with less utility than they had intended to raises a number of questions. Although there is no hard evidence on this, it appears that the everyday demands of the classroom and the school make it extremely difficult to find time to give full attention to admittedly desirable supervisory activities.

Perhaps the major implication of the findings is that the enormously complex series of situations and activities that are called student teaching can be subjected to analysis, but they must be analyzed in a variety of ways that recognize their complexity. The ideosyncracies of a particular individual or a particular situation may prove to be more influential than the evidence provided by grouped data.

Recommendations. On the whole, the study generated data which were more suggestive than conclusive. The whole conception of the study, particularly the unique manner in which interaction analysis was being used, provided continuous stimulation for thought and conjecture concerning potential future research in student teaching.

Many of the ideas evoked by the study fall within three basic categories. First, during the analysis of the data there was much interest in but little time for ex post facto reorganization of the data. Questions were asked concerning possible usefulness of different sorts of comparisons. Obviously there are almost limitless possibilities for this. Some examples follow:

a) A comparison of the data of student teachers working in urban and non-urban schools.

b) A comparison of the data of student teachers who taught at different grade-levels.

c) A comparison of the data of student-teachers whose cooperating teachers have had different amounts of teaching experience.

d) A comparison of the data of student teachers whose cooperating teachers had significantly different scores of various measures of attitude toward teaching.

e) A comparison of the data of student teachers who themselves come from urban and non-urban areas.

f) A comparison of the data of student teachers who worked in larger and smaller schools.

Second, the new ways in which interaction analysis was being used (and indeed the new systems themselves) suggested still more possibilities for use of that mode of analysis. Some possibilities which relate closely to the present study follow:

a) Training of the student teachers themselves in the particular interaction analysis system with which their treaching will be measured. This would enable them to produce their own prediction matrices which would eliminate the variability which occurs among observer prediction interviews.

b) Short of training student-teachers in the appropriate observation system, it might be possible to create a uniform prediction questionnaire for student teachers to fill out which could then be transcribed onto prediction matrices by observers or other trained personnel.

Third, for purposes of training rather than research, discussion and use of interaction analysis data in relation to other measures of teacher performance and attitude raises a whole series of questions about teaching which might not arise in a context from which such concrete vehicles for discussion are absent. Discussion of the issue of how much convergence student teachers made between their prediction and results leads to the question of just what perfect convergence would indicate about a single teacher, and what varying percentages of convergence between student teachers would tell about their respective performances. To ask such questions is to begin to explore the nature of effective teaching from a somewhat different perspective from the ones commonly taken. To have data on specific kinds of high or low convergence available for comparison with other measures of teacher and student performance may eventually provide new forms of information about the problems of teaching, forms which may be uniquely functional.

Specific recommendations follow:

1. Data collected in these studies should be subjected to continued analysis in terms of individual cases and dynamic interrelationships among individuals and situations.

2. The instruments and techniques of this study should be used in continuing research on teaching and student teaching.

3. The TSRT and Semantic Differential should be used in both research and training to find and clarify relationships among the analytical and the affective dimensions of teaching.

4. The notion of congruence of intent and action should prove useful if incorporated with feedback devices in teacher education programs.

5. In programs to train cooperating teachers, continued support and in-service follow-up should be provided.

6. Ways must be found to improve the conditions in which student teaching takes place so that cooperating teachers have the time and setting to engage in appropriate supervisory activities.

SUMMARY

1. In the Introduction to this report the purpose of the study and its relationship to related literature on student teaching were described.

Both Pilot Study and Continuing Study were attempts to ascertain whether training teachers to use specified feedback practices in supervising student teachers would result in measurable change in the instructional behavior of their student teachers as compared to student teachers working with cooperating teachers not so trained.

In the Continuing Study, this purpose was further refined to assess the differential value of specific practices.

The objectives of the training phase (the Workshops) and the hypotheses of the research phase were explicated.

2. The section on Methods described the training design and the activities of the Workshops which involved thirty-three prospective cooperating teachers in the summer of 1967, and thirty-five prospective cooperating teachers in 1968. The 1967 group was entirely from the Syracuse City School District; the 1968 group included five teachers from three contiguous districts.

Research activities were designed to assess the performance of student teachers in the Elementary Teacher Preparation Program at Syracuse University who worked with these cooperating teachers and comparable teachers who had not participated in the Workshops.

Observers were trained in relatively complex systems for recording observational data on instructional behavior of teachers and students. They observed each student teacher involved in the study six times. These observations took place in the Fall semester, 1967, and in both Fall and Spring semesters 1968-69.

Instruments administered to Workshop participants and student teachers included the Teaching Situation Reaction Test; a Semantic Differential on concepts of aspects of teaching; the Minnesota Student Attitude Inventory, (a) as student teachers perceived their ranking by students (Real) and (b) as they would like their students to rank them (Ideal). In addition, in the Pilot Study, a Workshop Activities Assessment Index was filled out at the conclusion of the Workshop and by the Workshop Cooperating teachers and their student teachers at the conclusion of student teaching. In the Continuing Study, the Index was used at the conclusion of the Workshop and converted into a Supervisory Activities Checklist which was completed by all participants at the conclusion of student teaching.

A computer program was developed to analyze the data gathered from the observations and instrument administration. The primary technique used to determine significance of findings was analysis of variance.

3. Statistical findings were presented textually and in fifty-three tables.

In all groups there was a statistically significant increase in congruence over the student teaching semester.

Differential effects of feedback among the groups of the Continuing Study were statistically demonstrated only with student teachers who were assigned in the Fall semester 1968 and who scored above the median on MSAI (Real). Those in the above classification who received interaction analysis feedback produced the highest convergence.

Full semester student teachers in the Pilot Study produced more consistent behavioral change than those given two half-semester assignments.

For all groups in both studies, there were marked differences between MSAI (Real) and MSAI (Ideal) with the Ideal being consistently higher. There were no apparent differences among the groups.

There were predominantly negative shifts in attitudes measured by the Semantic Differential in the Pilot Study. In the Continuing Study, there were about as many positive shifts as negative. Student teachers receiving videotape feedback produced more positive shifts than the other groups.

4. In discussing the findings, the statistical results were interpreted and speculation about their implications was presented. Recommendations were made about training designs and further research in this area.

While the analyses did not demonstrate differential effects of the supervisory feedback in all groups studied, evidence pointed to the existence of such effects in certain groups. The intensification of treatment and the development of processes for student teachers to form their own prediction matrices might have produced a more marked effect as well as more precise measurement of that effect.

Only a few of the variables in the complex student teaching process were investigated, but those have given new insights into the nature of the process.

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APPENDIX A

Objectives of the Workshops

WORKSHOP OBJECTIVES

The following statement outlines the objectives of the workshop as developed for the original proposal. After each statement two dates are given. The first date (A) indicates the instructors' target date for completion of basic instruction to lead to the accomplishment of that objective. The second date (B) indicates the expected date when participants should be able to demonstrate the attainment of that objective.

The primary objective of this workshop may be stated as follows:

As a result of this workshop, cooperating teachers should be able to help student teachers develop effective teaching behaviors that are congruent with their (the student teachers') unique potentials and teacher role perceptions, and are effective in guiding the learning of pupils in inner-city elementary schools.

In order to achieve the primary objective of the workshop, the participants will need to develop conceptual understandings of the teaching process and the skills necessary to give feedback to student teachers regarding critical aspects of their teaching behavior. The second level objectives of the workshop that deal with such skills and understandings are stated as follows:

1. Participants should demonstrate skill in the use of a portable video tape recorder as a technique for recording classroom instructional behavior.
   (A) June 25
   (B) June 28

2. Participants should be able to demonstrate skill in the use of interaction analysis as a technique for recording and analyzing spontaneous, verbal, instructional behavior.
   (A) June 28
   (B) July 2

3. Participants should demonstrate skill in the use of interaction analysis and video tape recordings as techniques in giving feedback to student teachers regarding their instructional behavior.
   (A) July 1
   (B) July 8

4. Participants should demonstrate the ability to help student teachers identify specific instructional acts and relate such acts to conceptual models of the teaching-learning process.
   (A) July 10
   (B) July 11

5. Participants should demonstrate the ability to guide supervisory conferences with student teachers in such a way as to help student teachers become more aware of their teaching intentions, their instructional behavior and the congruence between the two.
   (A) July 18
   (B) July 23

6. Participants should be able to relate specific instructional behaviors to conceptual models of the teaching-learning process.
   (A) July 22
   (B) July 23

7. Participants should be able to describe and discuss several conceptual models of the teaching-learning process as developed from the work of instructional theorists.
   (A) July 22
   (B) July 23

8. Participants should clarify and/or create for themselves conceptual models of the teaching-learning process that are congruent with their (the cooperating teachers') unique potentials and demonstrated teaching talents.
   (A) July 24
   (B) July 25

SECONDARY OBJECTIVE #1

Participants should demonstrate skill in the use of a portable video tape recorder as a technique for recording instructional behavior.

The following will be considered evidence that this objective has been met:

Without the assistance of any other person the workshop participant will demonstrate ability to operate a General Electric Video Tape recorder by performing the following operations.

1.1 Thread the tape correctly across the recording head and attach to the takeup reel.

1.2 Assemble the camera, video tape recorder, monitor, and microphone so that they are ready for recording.

1.3 Perform a check of the power, video and audio levels to be certain that they are at the proper level for effective recording.

1.4 Demonstrate the process of focusing the camera and setting the proper aperture opening for the available light source.

1.5 Record an event of two minutes duration that requires at least one correction of focus and aperture size.

1.6 Play back the recording, stopping, reversing and replaying a section of the recording twice.

1.7 Shut off all power to the camera, video tape recorder, and monitor and replace the lens cover.

This objective will be considered as having been met if in addition to the above operations, the video tape recording is of sufficient visual and auditory quality to be intelligible.

SECONDARY OBJECTIVE #2

Participants should be able to demonstrate skill in the use of interaction analysis as a technique for recording and analyzing spontaneous, verbal, instructional behavior.

The following will be considered evidence that this objective has been met:

2.1 Given twenty examples of teacher and student verbal behavior, correctly categorize eighteen out of twenty of these statements using the code numbers associated with categories of the Flanders System of interaction analysis.

2.2 Using the categories of the Flanders System of interaction analysis, categorize ten minutes of classroom verbal behavior at a rate approximating twenty categorizations per minute.

2.3 Using the categories of the Flanders System of interaction analysis, categorize ten minutes of classroom verbal behavior with an inter-observer reliability of at least .70.

2.4 Plot an interaction analysis matrix of two hundred tallies with an error rate of no more than 5% in a ten minute period of time.

2.5 Given twenty matrix cell designations, match at least eighteen out of twenty of such cell designations with a description of the verbal interaction patterns for which they stand.

2.6 Compute and in writing interpret the meaning of the I/D, i/d, S/T, student response I/D student response i/d, teacher response I/D and teacher response i/d ratios.

2.7 Given a matrix representing a lesson of fifteen minutes duration, analyze the lesson. In the analysis consider at least four of the following ratios: I/D, i/d, S/T, student response I/D, student response i/d, teacher response I/D, teacher response i/d; and at least four of the following regions: extended indirect influence, extended direct influence, extended student talk, student talk following teacher talk, teacher talk, following student talk.

SECONDARY OBJECTIVE #3

1968

Participants should demonstrate skill in the use of interaction analysis and video tape recordings as techniques for giving feedback to student teachers regarding their instructional behavior.

The following will be considered evidence that the objective has been met:

3. During two micro-teaching cycles the participant assigned the role of recorder should take interaction analysis on two micro-teaching episodes.

3.2 During two micro-teaching cycles, the participant assigned the role of observer should plot the interaction analysis data into a matrix. In both cases the matrix should be available for use in a supervisory conference, and should contain no more than 5% errors of tabulation.

3.3 During two micro-teaching teach-reteach cycles, the participant assigned the role of superviser should video tape the micro-teaching episodes. The video and audio signal should be of such quality that they are intelligible.

SECONDARY OBJECTIVE #4

Participants should demonstrate the ability to help student teachers state instructional objectives, relate specific instructional acts to objectives, and to translate instructional acts into conceptual models of the teaching learning process.

The following will be considered evidence that the objective has been met:

4.1 Prior to participating in each of the micro-teaching cycles the participant who acts as supervisor should assist the participant acting as teacher in the following preparatory activities:

4.10 Stating instructional objective(s) as observable behaviors.

4.11 Creating model(s) of instructional intent using critical cells and transition patterns as represented on the interaction matrix (suplemented where cell loadings have multiple or ambiguous meaning with verbal descriptions of instructional intent.)

4.12 Justifying instructional model(s) as being appropriate for the instructional objective(s).

4.13 Creating sample items of a measuring device to test whether the objective(s) have been met.

This objective will be considered as having been met when the participant acting as teacher presents an instructional plan containing (a) objective(s) (b) instructional model(s) (c) a brief justification for the model (d) sample items from a measuring device that conform to the third level objectives stated above and certifies that the participant acting as supervisor assisted in this process.

SECONDARY OBJECTIVE #5

Participants should demonstrate the ability to guide a supervisory conference with student teachers in such a way as to help student teachers become more aware of the congruence or lack of congruence that exists between their instructional intentions and their actual instructional behavior.

The following will be considered evidence that the objective has been met:

5.1 Immediately following the first micro-teaching cycle the participant acting as supervisor should assist the participant acting as teacher compare the teacher's instructional intent with the actual instructional behavior used in the first micro-teaching episode.

In doing this the participant acting as supervisor should do the following:

5.10 Make use of portions of the video tape recording of the micro-teaching incident.

5.11 Make use of the interaction analysis matrix of the micro-teaching episode in conjunction with the teacher's statement of intent as represented in a matrix.

5.12 Help the teacher see the congruence or lack of congruence between instructional intent and actual teaching behavior with respect to no more than two instructional factors.

5.13 Use basically describing, clarifying and probing behaviors (a maximum of two judgmental statements will be allowed in each supervisory conference.)

5.14 Talk no more than 30% of the time during the supervisory conference.

5.2 Immediately following the second micro-teaching cycle the participant acting as supervisor should assist the participant acting as teacher in focusing on the one or two instructional factors identified in the initial teaching episode as needing change.

In doing this the participant acting as supervisor should do the following:

5.20 Make use of the video tape recording of the episode.

5.21. Make use of the interaction analysis matrix of the reteach episode.

5.22 Help the teacher see and evaluate the behavioral change or lack of behavioral change in teaching with respect to the one or two specific teaching factors identified as needing modification.

5.23 Use basically describing, clarifying and probing behaviors (a maximum of two judgmental statements will be allowed in the supervisory conference.)

5.24 Talk no more than 30% of the time during the supervisory conference.

SECONDARY OBJECTIVE #6

1968

Participants should be able to relate specific instructional behaviors to conceptual models of the teaching learning process.

The following will be considered evidence that the objective has been met:

6.1 Without using external sources, the participant should be able to match sixteen out of eighteen of the following terms with an acceptable definition of the term and a description of teacher or student behavior that is an example of the term operationalized in the classroom.

a. Reinforcement
b. Positive reinforcement
c. Negative reinforcement
d. Aversive stimulation
e. Behavior shaping
f. Terminal behavior
g. Intermediate terminal behavior
h. Acceptance
i. Clarification
j. Insight
k. Figure ground relationships
l. Social emotional climate
m. Indirect behavior
n. Direct behavior
o. Intrinsic motivation
p. Extrinsic motivation
q. Empathy
r. Congruence

6.2 Given an observable teaching episode, the participant should, without using external sources, be able to accurately criticize in writing the episode in terms of at least three of the following theories (a) perceptual theory (b) motivational theory (c) social-emotional climate theory (d) reinforcement theory.

SECONDARY OBJECTIVE #7

Participants should be able to describe in writing several representative models of the teaching-learning process and apply in instructional behavior selected principles drawn from these models.

The following will be considered evidence that this objective has been met:

7.1 Without using external sources the participant should be able to describe in writing in one hundred words or less for each, the essential theoretical or descriptive characteristics of teaching models drawn from the work of four of following instructional theorists: (a) Flanders (b) Taba (c) Bellack (d) Gallagher and Aschner (e) Hough and Amidon.

7.2 Without using external sources, the participant should be able to correctly identify sixteen out of eighteen questions or clarifying statements as verbal behaviors designed to call forth in students the following thought processes: (1) enumerating or listing (2) grouping (3) labeling or categorizing (4) identifying (5) explaining (6) making inferences (7) predicting consequences, hypothesizing or explaining unfamiliar phenomena (8) explaining or supporting predictions or hypotheses (9) verifying predictions or hypotheses.

7.3 Without using external sources, the student should be able to construct in writing two illustrative questions or clarifying statements that would be designed to call forth in students each of the following thought processes: (1) enumerating or listing (2) grouping (3) labeling (4) identifying (5) explaining (6) making inferences (7) predicting consequences (8) explaining or supporting predictions or hypotheses (9) verifying predictions or hypotheses. A criterion performance of sixteen correct questions will be considered acceptable.

7.4 Without using external sources the student should be able to correctly identify seven out of eight questions or clarifying statements as verbal behaviors designed to call forth in students the following mental processes: (a) cognitive memory mental processes (b) convergent mental processes (c) divergent mental processes (d) judgmental or evaluative mental processes.

7.5 Without using external sources the participant should be able to construct in writing two illustrative questions or clarifying statements that would be designed to call forth in students each of the following mental processes: (a) cognitive memory mental processes (b) convergent mental processes (c) divergent mental processes (d) judgmental or evaluative mental processes. A criterion performance of seven out of eight correct questions or clarifying statements will be considered acceptable.

7.6 During the second micro-teaching episode the supervisor will (1) record verbatim a sample of the questions or clarifying statements and-(2) the student statement which follows. During the supervisory conference the teacher will analyze each interpersonal interaction by judging whether or not the student behavior called forth was at the level of thought intended to be called forth by the question or clarifying statement.

Secondary Objective #7, continued

7.7 Without using external sources the participant should be able to correctly identify seven out of eight statements that illustrate examples of the following: (a) praise or encouragement using private criteria (b) praise or encouragement using public criteria (c) corrective feedback or criticism using private criteria (d) corrective feedback or criticism using public criteria.

7.8 Without using external sources the participant should be able to construct in writing two illustrative examples of the following types of statements: (a) praise or encouragement using private criteria (b) praise or encouragement using public criteria (c) corrective feedback or criticism using private criteria (d) corrective feedback or criticism using public criteria.

7.9 Without using external sources the participant should be able to state in one hundred words or less the characteristic differential effects of the use of public and private criteria in statements of praise and reproof on the following types of students: (a) students with a negative self concept (b) students with a positive self concept.

SECONDARY OBJECTIVE #8 1968

Participants should create for themselves conceptual models of the instructional process that are congruent with their unique teaching talents.

8.1 Using critical cells of an interaction analysis system, the participant should (a) develop at least six models of instructional strategies that represent typical teaching patterns appropriate for the content, objectives and grade level that the participant teaches. (b) In doing this, the participant should briefly describe at least three specific teaching talents that he or she has identified or clarified during the workshop and briefly state how these specific talents are capitalized on in the instructional models.

WORKSHEET 2.1 (1968)

lease place appropriate Flanders' category in spaces provided in examples hich follow:

______ Teacher: "Today we're going to discuss the stories we read yesterday."

______ Teacher: "Please open your books to page 159."

______ Teacher: "Your paper is very neatly done, Jimmy."

______ Student: "The answer to problem 6 is 392."

______ Student: "I think we should go over our homework first, Miss Jones."

______ Teacher: "It looks like you enjoyed your field trip."

______ Student: "Well who did discover the Pacific Ocean, Miss Jones?"

______ Teacher: (Responding to g.), "Balboa discovered the Pacific Ocean, John."

______ Teacher: "What do you think about the forthcoming elections?"

______ Student: (Responding to i.) "It looks like Nixon and Humphrey will be the candidates."

______ Teacher: (Responding to j.) "You think Nixon and Humphrey will be the candidates."

______ Teacher: "John, how could you give me such a poor answer?"

______ Teacher: "That is called the commutative law."

______ Teacher: "If we know 3 + 5 = 8 what do we know about 5 + 3?"

______ Student: "According to what you said yesterday the answer is Captain John Smith."

______ Teacher: "You should all pay attention to the directions at the top of the worksheet."

______ Student: "Where should the decimal point go in this kind of problem?"

______ Teacher: "John has given us a very good answer."

______ Teacher: (Continuing r) "He has said Jamestown was founded before Plymouth."

______ Teacher: (Continuing s) "What else does our book tell us about Jamestown?"

WORKSHEET 2.1a (1968)

Please place appropriate Flander's category in spaces provided in examples which follow:

a._____ Teacher: "Please turn to the map on page 148."

b._____ Student: "Do we add or subtract in this kind of problem?"

c._____ Teacher: "What did you get as the answer for the fourth problem, John?"

d._____ Teacher: "Bill's answer is very good because it's so well thought out."

e._____ Teacher:(continuing d) "He has said the water pressure and air pressure caused the bar to float."

f._____ Teacher:(continuing e) "Does this agree with what the book has to say?"

g._____ Student:(responding to f) "Yes, it does agree with the book."

h._____ Teacher: "You seem to be a bit puzzled by that question, John."

i._____ Teacher: "Your answers to number 6 were really poor, class."

j._____ Student: "Is my answer to problem 2 correct, Miss Brown?"

k._____ Teacher:(responding to j) "Yes, your problem is correct, John."

l._____ Teacher: "You did very well on your exam, Bill."

m._____ Teacher: "What kind of problem do we call this, Sue?"

n._____ Student:(responding to m) "That's called a reading problem in our book."

o._____ Teacher:(responding to n) "A reading problem."

p._____ Teacher:(continuing o) "Very good."

q._____ Teacher: "What's your favorite color, Bill?"

r._____ Student: "I like blue the best."

s._____ Teacher: "Albany is the capital of New York State."

t._____ Teacher: "Tom, will you please close the window a bit?"

WORKSHEET 2.5 (1968)

Cell Designations:

1. 4-9
2. 5-5
3. 9-3
4. 4-8
5. 8-2
6. 7-6
7. 3-4
8. 8-9
9. 2-3
10. 9-1
11. 4-4
12. 6-6
13. 8-7
14. 1-1
15. 5-9
16. 3-3
17. 6-10
18. 2-9
19. 5-4
20. 9-9

Please place number of appropriate cell in spaces provided in examples which follow:

a.______ Student responds and his response is criticized by the teacher.

b.______ Teacher criticizes student behavior and gives student a command.

c.______ Teacher gives information and asks a question based on that information

d.______ Teacher praises student's idea and interprets idea.

e.______ Teacher asks broad question to which student responds with divergent answer.

f.______ Teacher accepts student feeling for extended period.

g.______ Teacher asks narrow question to which student responds with correct answer.

h.______ Teacher asks several questions.

i.______ Student elaborates on his divergent response.

j.______ Teacher lectures for extended period.

k.______ Student responds with cognitive memory answer and continues by giving personal opinion.

l.______ Teacher tells students to go to blackboard and they do.

m.______ Teacher gives lengthy directions regarding seat work assignment.

n.______ Student says he is very bored and teacher repeats what student has said.

o.______ Teacher accepts and builds on a student's idea.

p.______ Teacher calls on student who has indicated by raising his hand--that he wants to speak and student asks a question.

q.______ Student answers with the correct answer and the teacher praises him.

r.______ Student interrupts while teacher is lecturing.

s.______ Student gives his opinion which teacher clarifies for class.

t.______ Teacher, having accepted student's idea, asks probing question based on the idea.

WORKSHEET 2.5a

Cell Designations:

1.	4-9	6.	7-6	11.	4-4	16.	3-3
2.	5-5	7.	3-4	12.	6-6	17.	6-10
3.	9-3	8.	8-9	13.	8-7	18.	2-9
4.	4-8	9.	2-3	14.	1-1	19.	5-4
5.	8-2	10.	9-1	15.	5-9	20.	9-9

Please place number of appropriate cell in spaces provided in examples which follow:

a.______ Teacher lectures for extended period.

b.______ Teacher asks lengthy question.

c.______ Teacher accepts student feeling for extended period.

d.______ Teacher criticizes student behavior and gives student a command.

e.______ Teacher, having accepted student's idea, asks probing question based on the idea.

f.______ Student answers with the incorrect answer and the teacher criticizes him.

g.______ Teacher accepts and clarifies a student's idea.

h.______ Teacher gives lengthy directions regarding homework assignment.

i.______ Student responds correctly and his response is praised by the teacher.

j.______ Teacher asks evaluative question to which student responds with evaluative answer.

k.______ Teacher asks cognitive memory question to which student responds with correct answer.

l.______ Student gives his opinion which teacher clarifies for class.

m.______ Teacher calls on student who has indicated by raising his hand--that he wants to speak and student asks a question.

n.______ Teacher tells students to go to open their books and they do.

o.______ Student responds with convergent answer and continues by giving personal opinion.

p.______ Teacher gives information and asks a question based on that information

q.______ Teacher praises student's idea and repeats it.

r.______ Student elaborates on his own idea.

s.______ Student says he is very happy and teacher accepts what student has said.

t.______ Student interrupts while teacher is giving information.

WORKSHEET FOR OBJECTIVE 6.1

By using the appropriate label (a,b,c, etc.) match the following terms with the definitions and descriptions below. Place the proper label in the space before the definition or example.

Labels:

a. Reinforcement
b. Positive reinforcement
c. Negative reinforcement
d. Aversive stimulation
e. Behavior shaping
f. Terminal behavior
g. Intermediate terminal behavior
h. Acceptance
i. Clarification
j. Insight
k. Figure-ground relationship
l. Social-emotional climate
m. Indirect behavior
n. Direct behavior
o. Intrinsic motivation
p. Extrinsic motivation
q. Empathy
r. Congruence or congruent

Definitions:

____ 1. The conditions which connote the quality of interaction in a classroom.

____ 2. Those verbal behaviors of a teacher which tend to restrict the freedom of students.

____ 3. Those stimuli from a teacher or situation which are designed to curtail or block a specific behavior of a student.

____ 4. The behavior which is desired or observed as evidence that an objective has been reached.

____ 5. Those verbal behaviors of a teacher which tend to expand the freedom of students.

____ 6. The condition, or moment in time, in which comprehension, or a flash of understanding, is achieved.

____ 7. The condition in which two or more persons FEEL essentially the same about something.

____ 8. Classroom verbal behavior which causes the student to recognize that the teacher thinks his statement is useful or worthwhile.

____ 9. Giving a reward of some kind immediately following an emitted behavior.

____10. Rewarding a partial behavior that moves toward the desired behavior.

____11. Punishing or criticizing an undesired behavior.

____12. Receiving positive feedback that one's behavior has achieved one's goals or satisfied one's motivations.

____13. The condition of recognized similarity between one set of data and another.

____ 14. The perceptual condition which causes an item or object to appear differently according to the context.

____ 15. That behavior which gives evidence that the student is moving toward the desired final behavior.

____ 16. Pressure on the learner of recognition, reward, or punishment for symbols of achievement rather than for the value of the achievement itself.

____ 17. Granting to the learner a reward that he values for the specific behavior he has performed.

____ 18. The condition in which the individual is encouraged, forced, or pressured to explicate his statement or position.

Examples:

____ 1. The teacher says, "Now, if you do a good job on this assignment, your grade will go up."

____ 2. A student says, "Could you repeat that definition and give us an example?"

____ 3. A teacher asks a question. A student responds, and the teacher says, "that's almost right, can you take your response a little farther to come closer to a final answer?"

____ 4. A class has been working through a discovery lesson, and, at a particular moment, a majority of the class seems to respond by saying "ah-ha-I think I see it!"

____ 5. A teacher lectures or gives information to a class.

____ 6. A student is particularly interested in a special subject and the teacher seeks ways to satisfy this interest.

____ 7. A student tells a teacher that he has enjoyed a particular story, and the teacher responds sincerely by saying, "I enjoyed it, too."

____ 8. A teacher intends to do particular things during a lesson. An observer's interaction analysis indicates that he (she) has done so. The result could be called ________________.

____ 9. In a specific classroom, the teacher tends to accept student feelings, praise student contributions, accept student ideas, and ask questions. This would be referred to as ______________ behavior.

____ or ____ 10. A student answers a teacher's question. The teacher says, "Good, that's right." This could be classified as indirect influence. It could also be classified as ______________ or ________________________.

____ or ____ 11. A student answers a teacher's question. The teacher says, "Wrong, that's a terrible answer." This could be classified as direct influence (7). It could also be classified as ________________ or ________________.

____ 12. A student responds to a teacher's question, and the teacher (non-judgmentally) repeats the student's answer. This would be classified as ________________.

____ 13. A teacher has a particular behavioral objective for a student, or group of students. When he checks their behavior in some fashion, he finds that they can all perform satisfactorily according to the criterion measure. We would say that they have achieved the desired ________________ ________________.

____ 14. A classroom observer makes an analysis and talks with the teacher about the relative use of direct and indirect influence. He would be dealing with the ________________ ________________ ________________ in the classroom.

____ 15. Halfway through a unit, a teacher checks the understanding (as demonstrated through verbal behavior) of students. He uses this evidence to diagnose student learning and re-plan his instructional strategies. We could say that he has checked the ________________ ________________ of his students.

____ 16. The class is working with a felt board and the teacher asks student to place the circle on the square to see if one is larger than the other.

WORK SHEET FOR OBJECTIVE 7.2

Match the questions or clarifying statements in column B with the level of thought processes, listed in column A, that the question or clarifying statement would be designed to solicit from students. Place your responses in the space provided in column A.

COLUMN A

1. Enumerating or listing ____ ____
2. Grouping ____ ____
3. Labeling or categorizing ____ ____
4. Identifying ____ ____
5. Explaining ____ ____
6. Making inferences ____ ____
7. Predicting consequences ____ ____
8. Explaining predictions ____ ____
9. Verifying predictions ____ ____

COLUMN B

a. From the vocations we have listed on the board, can you select the ones that would be government jobs?

b. Why did Columbus sail for Spain rather than Italy?

c. Can you select a bird from the chart that would feed on small animals?

d. Why do you think the balloon would expand if you heated the air that is in it?

e. Given the data that we have here about the raw materials and other natural resources available in Bolivia, what do you think would be one of the major industries of Bolivia?

f. How would you go about finding out if a decrease in water temperature from 80° to 60° would result in a decrease in food consumption for the goldfish?

g. Who was President Eisenhower's Vice-President?

h. Can you arrange the groups of pictures of animals so that when the groups are rearranged they represent of continuum of evolutionary development from the lowest order of development to the highest?

i. What would happen in the United Arab Republic if President Nassar were to order general free elections for the presidency and ruled himself out as a candidate?

j. Why do you think that we would have a less serious racial problem in the United States today if President Lincoln had not been assassinated and had served two full terms as president?

k. With the facts that you now have about place values in the decimal system, the base six number system and the binary number system, which system do you think would be the best to use if ease of computation was the criterion for selection?

l. How would you determine if an increase in student participation in setting the rules for classroom behavior would lead to fewer rules being broken.

m. Who is the mayor of Syracuse?

n. Can you make three columns of numbers, one that has the highest in the hundreths place, one that has the highest value in the tenth's place and one that has the highest value in the one's place.

o. Why do you think that Florida would go into an economic slump if a chang in climate resulted in an average temperature change that was twenty degrees lower than the present average temperature?

p. Can you put all of the rectangles in one box and all of the triangles in the other box?

q. How was the invention of the printing press related to increased availability of knowledge?

r. Can you select the square from the different shaped blocks on the table?

WORKSHEET FOR OBJECTIVE 7.4

Match the questions or clarifying statements in column B with the level of thought processes listed in column A, that the questions or clarifying statements would be designed to solicit from students. Place your responses in the space provided in column A.

COLUMN A

1. Cognitive memory ____ ____
2. Convergent thought ____ ____
3. Divergent thought ____ ____
4. Evaluative thought ____ ____

COLUMN B

a. How do you think our new system of classroom government is working?

b. What is the largest city in New York State?

c. If you had 6 apples and you gave 2 to John and 2 to Sally, how many would you have left?

d. If the draught had continued in Central New York State, what would have been the effect on the recreation industry in New York State?

e. Who is the governor of New York?

f. If 2 to the second power is 4, what is 2 to the third power?

g. Which encyclopedia do you think was most helpful to you in preparing your report and why?

h. What would be the effects on New York City if we had another power blackout that lasted for a full week?

WORKSHEET FOR OBJECTIVE 7.7

Classify the following teacher statements as (a) praise or encouragement using private criteria, (b) praise or encouragement using public criteria, (c) corrective feedback or criticism using private critera, or (d) corrective feedback or criticism using public criteria.

____ 1. "I will not put up with any more noise."

____ 2. "You answered that well because you gave examples to illustrate your points."

____ 3. "I won't accept that kind of work from you."

____ 4. "Your paper was difficult to read because there were so many misspelled words."

____ 5. "Your homework paper made me very happy."

____ 6. "John's statements about South America are correct according to the map in your books."

____ 7. "I don't think Milt's report was as good as Vera's."

____ 8. "Your drawing isn't quite right. The relative size of the figures destroys the perspective."

____ 9. "No, your answer is incorrect. The dictionary defines that term as...."

____ 10. "That's a very good answer!"

____ 11. "Yes, that's right. You remember that we all agreed to use that procedure."

____ 12. "No, you may not do that. The Principal won't like it."

WORKSHEET FOR OBJECTIVE 8.1

(a) Using opaque (regular paper) matrix forms, formulate at least six models of teaching intent representing instructional strategies for specific content and objectives for the grade level that you teach. On the back of each sheet, describe verbally the content, objectives and rationale for the model.

(b) Describe (with or without modesty) your perception of particular teaching talents that you have. (e.g.--"I listen well."--"I organize description clearly."--"I find and present instructional materials magnificently."--"I make kids work.") Explain how these talents are exploited in the instructional models.

APPENDIX B

Instruments of the Study

TEACHING SITUATION REACTION TEST

Revised September, 1966

Directions: The case example that follows has been planned to measure your ability to work through some of the problems of handling a classroom group. You will be given certain information about the classroom group and the working situation. You will then be asked to respond to a number of questions. This will be repeated through a series of problem situations. The case study has been designed so that you can respond regardless of your teaching subject field. You do not need technical subject matter knowledge to take this test.

You are asked to indicate your first, second, third, and fourth choice under each question by inserting respectively the numbers 1, 2, 3, 4, in the spaces provided on the answer sheets under (a) (b) (c) and (d). The most desirable choice should be labeled 1, and the least desirable 4. For example if your first choice was response (c), your second choice was response (a), your third choice was response (b), and your fourth choice was response (d), you would record your responses on the answer sheet as follows:

(a)	(b)	(c)	(d)
2	3	1	4

Please do not write on the test booklet.

The Situation:

You have been employed by a school system which is engaged in a series of experimental studies. One of these studies involves an experimental class designed to improve pupils' general adjustment to their environment. A heterogeneous group (physical, mentally, socially) of twenty-five sixth grade youngsters have signed up for this class.

The class is scheduled to meet the last hour of the day on Tuesday and Thursday during the last half year. Arrangements have been made so that the class might take trips and students might have an opportunity to meet informally with the teacher after class.

Around the first of November your principal calls you in to tell you that, if you are interested, you have been chosen to teach the experimental class. You were asked because of your background in child psychology and your interest in helping youngsters with minor problems of adjustment typical of the pre-adolescent.

Your principal has given you pretty much of a "free hand" to develop the content of the course and the activities in which the students will be engaged. A good supply of instructional materials, books on children, and descriptions of similar programs in other schools has been made available to you. There will be no direct supervision of your work, but an evaluation by students and yourself will be requested at the middle and close of the semester. Studies will also be made of the gain in personal adjustment evidenced by your students. You know the names of the students who have signed up for your course. An experienced teacher-counselor has been asked by the principal to help you when and if you ask for help. The teacher-counselor knows well each of the youngsters who have signed up for your class.

The Group:

Some of the youngsters who have signed up for the course know each other very well, having gone through school together. Three do not know anyone else in the group. Others are only casually acquainted. Members of the group have a variety of interests and abilities, and they represent many levels of competence and come from a variety of socio-economic backgrounds. The quality of their personal adjustment varies, but none is seriously maladjusted.

A. You have about eight weeks plus the Christmas vacation to plan for your class:

1. When you begin planning the course you would:

   (a) Ask your teacher-counselor what he thinks should be in the course.

   (b) Examine the materials available to you and determine how they might be used by members of the class.

   (c) Read through the copies of publications describing other school programs of a similar nature and draw ideas from them.

   (d) Interview a randomly selected group of the young people signed up for the course and set your own tentative objectives based on these interviews.

2. During early December an important local civic group comes out against teaching sex education in the schools. Your planning had included some sex education. At this point in your planning you would:

   (a) Continue planning as you have been.

   (b) Ask the principal if you should include any sex education in your course.

   (c) Remove the lessons dealing with sex education.

   (d) Find ways to get the sex education material across without causing an issue.

3. About three weeks before your class is scheduled to meet for the first time, your principal asks you to come in and talk with him about the course. You would hope that your principal would:

   (a) Say that if there was anything that he could do to be of help that you should feel free to call on him.

   (b) Indicate to you what he would hope the course would accomplish during the semester.

   (c) Encourage you to talk about the purposes of your course as you see them after several weeks of planning.

   (d) Make specific suggestions to help you in your planning, and encourage you to drop in for further suggestions if you need help.

4. The weekend before the course is to start it would be natural for you to feel:

   (a) Concern that your planning has been inappropriate.

   (b) Anxious to get started and prove your ability to handle this rather difficult assignment.

   (c) Hopeful that the course will prove of real value to the studen

   (d) Confident knowing you have done the best you could under the circumstances.

B. You will have your first meeting with the group tomorrow.

5. It will be important that you have planned for:

   (a) students to get well acquainted with each other.

   (b) explaining your grading system.

   (c) activities to catch student interest.

   (d) explaining your complete program for the semester.

6. The teacher-counselor drops by your room and asks if he can be of help. You would ask him for:

   (a) his opinion about what you have planned for tomorrow.

   (b) suggestions to help you make a good impression.

   (c) suggestions as to what student reaction might be on the first day.

   (d) nothing until you had an opportunity to meet with the group.

7. The more important personal information to gather at the first meeting would be:

   (a) interests of the different students.

   (b) parent or guardian, home address and phone number.

   (c) what the students would like to do in the course.

   (d) why they are taking the course.

8. Of the things you would do the evening before meeting the class, the most essential would be to:

   (a) become familiar with the notes for such presentations as you might make.

   (b) become familiar with students' names and any information you have about them from their files.

   (c) become familiar with the sequence and nature of any activities you may have planned.

   (d) be sure any materials you were to use were available and in good condition.

9. Your greatest concern on this night before the first meeting would be:

   (a) how to appear poised and at ease.

   (b) how to gain control of the group.

   (c) how to handle problem pupils

   (d) how to get your program moving rapidly and well.

C. On meeting the group the first day a number of students come in from three to five minutes late. Following this, as you get your program underway the students get restless.

10. With the students that come in late you would:

(a) simply acknowledge their presence and noticeably mark them present in the record book.

(b) inform them politely about the time at which the class starts.

(c) ask them politely why they were unable to get to class on time.

(d) make clear to the class as a whole and the late students in particular the standards you will maintain with regard to tardiness.

11. You would handle the restlessness of the group by:

(a) presenting your program more dynamically

(b) asking students why they were restless

(c) speaking to the group firmly about paying attention

(d) picking out one or two of the worst offenders and reprimanding them

12. You would tell the group your name and:

(a) the rules of conduct for your class

(b) your expectations for the class

(c) some of your personal adjustment problems at their age

(d) some of your interests and hobbies

13. You would, by your general behavior and manner, try to present yourself as:

(a) firm and serious but fair

(b) efficient, orderly and business-like

(c) friendly, sympathetic and understanding

(d) understanding, friendly and firm

14. You would prepare for the next meeting by:

(a) discussing with pupils what they would like to do and deciding on one or two ideas

(b) telling them what pages to read

(c) giving students a choice of two ideas and determining in which the majority is interested.

(d) discussing your plans for the next meeting with them.

D. You have met with your class four times and have made some observations. Two boys seem particularly dirty and you have found they come from a lower class slum area. One girl seems to be withdrawn. The students do not pay any attention to her. She is a pleasant looking well dressed girl. There are four or five youngsters, apparently very good friends (both boys and girls) who do most of the talking and take most of the initiative. Students seem to continually interrupt each other and you.

15. In the interests of the two boys from the slum area you would:

(a)find an opportunity to discuss the matter of cleanliness with the class

(b)speak to the boys about their need to be clean in a conference with them

(c)inaugurate a cleanliness competition with a prize to that half of the class with the best record, putting one boy in each half

(d)speak to the boys about their need to be clean and arrange facilities at school where they could clean up

16. In the interests of the apparently withdrawn girl you would:

(a)talk to her informally over a period of time to see if you could determine her difficulty

(b)call on her regularly for contributions to the discussion

(c)discover a skill she has and have her demonstrate for the class

(d)have a conference with her and tell her to become involved with the class discussion and speak up

17. To improve the relationship of the group to the apparently withdrawn girl you would:

(a)determine who, if anyone, is friendly with her and arrange to have them work together on occasion

(b)take the girl aside and help her see how she can establish better relations with her classmates

(c) arrange to have her work with the group of boys and girls who take most of the initiative

(d)allow her to work out her own problem

18. With regard to the four or five youngsters who do most of the talking and take the initiative you would tend to believe:

(a)they are brighter than most of the other students

(b)they are the leaders of the class

(c)there is considerable variation in student's ability to participate in class

(d)they are a little too cocky and think they know more than the others

19. With regard to the tendency of class members to interrupt while others are talking you would:

(a) tell the class politely but firmly that interruptions are impolite and should not continue

(b) discuss the matter with the class, determining why this happens and what should be done about it

(c) organize a system of hand raising and set rules for students participation in discussion

(d) set rules for student participation in discussion and firmly but fairly reprimand each person who breaks the rules

20. One of the important problems facing you now is to do something which:

(a) will insure that no one is rejected or disliked

(b) will result in everybody's being liked

(c) will encourage each person's acceptance of the others

(d) will guarantee that no one's feelings get hurt

E. At the beginning of the eighth class session (fourth week) Johnny comes into class holding on to his arm and very nearly crying. The tears are welled up in his eyes and he looks away from the others. You notice that Peter, the largest and strongest boy in the class, looks at Johnny occasionally with a sneering smile. You do not feel that you can let this pass, so you arrange to meet with Johnny and Peter separately after class.

21. You would tend to believe:

(a) that Johnny probably did something for which this was just, but maybe severe, payment

(b) that Peter is something of a bully

(c) that Johnny was hit on the arm by Peter

(d) that Johnny felt badly and Peter was quite aware of it

22. When you meet with Johnny you would:

(a) ask him if Peter hit him and why

(b) engage him in conversation and lead slowly into the difficulty he had that afternoon

(c) tell him you were aware that he had some difficulty and offer your help to him

(d) let him guide the discussion and reveal what he would about the incident

23. When you meet with Peter you would:

(a) tell him that Johnny was upset this afternoon and you had noticed that he (Peter) was looking strange--proceed from there

(b) make him aware that you know he had trouble with Johnny and proceed from there

(c) make him aware that he is bigger and stronger than the other boys and that he is a bully if he picks on smaller boys

(d) ask him if he and Johnny had had difficulty

24. When young people get into conflict in school it would be best to:

(a) let them resolve it themselves

(b) help them to establish a friendly relationship

(c) find the cause of the trouble and work to eliminate it

(d) control the school situation so that the conflicts are less likely to arise

F. In general your program has been moving along satisfactorily, but after the eighth meeting you have a feeling that the students are beginning to lose interest. A number of students seem to be sitting through class without really getting involved. Others seem to stay interested and active. The teacher-counselor asks to see you informally over coffee.

25. When you meet with the teacher-counselor you would:

(a) not talk about your class or its present lack of involvement

(b) discuss your concern with him and listen for suggestions he might have

(c) speak about how satisfactory the early meetings had been

(d) allow the teacher-counselor to orient the discussion

26. Your planning for the next (ninth) session would include:

(a) some new ideas that you had not tried

(b) some clarification of the importance of students doing well in their work

(c) a request for ideas from students as to how to make the class more interesting

(d) ways to get more students actively doing something in class

27. During the ninth session you would:

    (a) behave much as you had in earlier sessions

    (b) put some stress on the importance of everybody paying attention in class

    (c) by careful observation determine which students seem disinterested

    (d) speak pointedly to those who were not paying attention

28. You would tend to believe the loss of interest due to:

    (a) a rather natural reaction in an elective experimental course

    (b) failure of students to realize that they must contribute much to a course of this kind

    (c) a rather natural group reaction to the experience of working together on personal adjustment problems

    (d) your own failure in developing good human relationships in the class and stimulating the students

G. Before the mid term (eighteenth) meeting of the class you take time out to think about the experiences you have had. The class has been good some days and poor other days. You have had no word from your principal about how your work has been. The teacher-counselor has seemed satisfied but not very much impressed with what you are doing. You have heard nothing about the young people who are being studied. You are asked to meet with the parents to discuss the experimental class in an informal way.

29. You would be most concerned about:

    (a) the failure of the principal and teacher-counselor to discuss the progress of the students before your meeting with the parents

    (b) what you should say to the parents

    (c) your apparent failure to impress your teacher-counselor

    (d) what the studies of the young people are showing

30. You would resolve to:

    (a) discuss your progress with the teacher-counselor

    (b) ask for an appointment with the principal to find out how he feels about your work

    (c) plan to work harder with your group

    (d) not let the present state of affairs worry you

31. When talking with the parents you would:

(a) encourage them to ask questions about the program

(b) tell them what the program has consisted of so far

(c) tell them you don't know how well the program is going

(d) impress upon them the importance of student participation in class activities.

32. In this case you would feel that parents:

(a) ought to be told how their children are doing in this class

(b) ought not to become involved in such an experimental program

(c) are entitled to an opportunity to question you

(d) ought to be referred to those in charge of the experiment

33. At your next class meeting:

(a) you would tell students what you told their parents

(b) you would not initiate any discussion about your visit with the parents

(c) you would discuss briefly the parents' interest in the class

(d) you would tell the students that you expected more cooperation from them now that their parents were involved

H. The nineteenth and twentieth class sessions are very unsatisfactory. You leave class at the end of the twentieth session with doubts in your mind as to whether students are gaining in personal and social adjustment. You can see problems with the structure and organization of the class and believe that if these could be corrected or if you had done some things differently over the past few weeks that you would not have a problem with the class.

34. At this point you would:

(a) decide to go to class the next day and ask your students how they feel about the progress of the class

(b) think through the problem carefully and start planning revisions for the course next year

(c) try to help yourself accept the fact that life is often filled with disappointments and redouble your efforts to make your class better in the future by spending more time in preparation and encouraging your students to work harder.

(d) mention your concern at the next meeting of your class and encourage students to talk with you after class about the progress of the course

35. You would feel much better regarding the accuracy of your estimate about what is wrong with the class if you:

   (a) were sure that some of the students were not being difficult on purpose to test your authority as a new teacher

   (b) knew more about the expectations of your students and to what extent they felt their expectations were being met

   (c) could have a colleague in whom you could confide and in whom you could trust, come in and observe your class and talk with you

   (d) were sure you understood your own needs for success and the extent to which these needs influence your feelings

36. After the twentieth session, it would be natural for you to feel that:

   (a) you would like to relax and think about the situation over the weekend

   (b) you wished students accepted the fact that things that are taught them in schools are usually good for them even though they may not like what they are learning all of the time

   (c) things seldom go well all the time for everybody and that they couldn't be expected to always go well for you

   (d) it must have been wonderful to teach in the good old days when students were in school because they wanted to learn

37. In an attempt to analyze the source of the problem you are having with your class you would:

   (a) have a conference with several of the brighter and more interested students to see if they could give you any insight into the problem

   (b) take part of a class session to share your concerns with the class, get their reactions, and using this information, rethink the problem

   (c) ask the teacher-counselor to come in and observe the class several times and talk with you about his observations

   (d) consult the records of the students to see if you could find any clues there

I. At your twenty-fourth meeting you wish to make plans for a series of visits to different community health and welfare agencies. You want to be sure that the youngsters learn from the experiences and conduct themselves properly while traveling to and from and visiting in the agencies.

38. In order to assure that all youngsters learned from their first trip you would:

    (a) assign particular things for all of them to look for and listen to

    (b) ask each to write a brief commentary on the most important things they saw and heard

    (c) encourage them to ask questions while they were there

    (d) present them with a check sheet of items to be seen and heard and ask them to check off those that they saw or heard

39. In preparation for the first trip you would:

    (a) tell them as much as you could about the agency to which they were going

    (b) tell them you were sure it would be interesting and fun and let them see and hear for themselves

    (c) ask them what they thought they could expect and encourage guided discussions about their expectations

    (d) tell them about the most interesting things they would see and hear

40. To insure that the group conducted themselves properly you would:

    (a) set out rules of conduct for them

    (b) ask them to behave as young ladies and gentlemen representing their school

    (c) ask them what rules of conduct they would propose and develop a code with the group

    (d) assure them that if they did not behave properly they would not go on trips in the future

41. On the trips you would:

    (a) divide them into small groups with a leader responsible for each group and arrange their itinerary and meetings after you get to the agency

    (b) ask the youngsters to get your permission first and on this basis allow them to pursue their own interests

    (c) let the agency people take responsibility for deciding where they could go and when

    (d) keep them all together as a manageable group

J. At the close of the thirtieth class session Bob, one of the most able boys, summarizes a class discussion on boy-girl relationships with, "Well, we've talked around the subject but we never get down to the important questions." The agreement of a number of the class members is evident.

42. You would tend to believe:

(a) the class members are too young to be dealing with important questions in this area

(b) you had allowed just a little too much freedom in the discussions of boy-girl relationships

(c) this simply reflects a natural desire on the part of students to introduce some excitement into the class sessions

(d) the class could handle important questions in this area with your guidance and support

43. Before the thirty-first session you would:

(a) clarify the significance and implications of Bob's statement in your own mind

(b) determine what you will and will not allow to be discussed in class in this area

(c) consult the principal and get direction from him

(d) discuss the situation with the teacher-counselor with a view to getting ideas for handling the next session

44. During the thirty-first session you would:

(a) propose a list of carefully selected questions you believe the students have in mind and begin discussions on the most manageable of these

(b) repeat Bob's comment and draw from the class a list of what they thought should be discussed

(c) suggest that some questions are not appropriate for discussion in school and that some of these fall in the area of boy-girl relationship

(d) ask Bob to pick up where he left off and guide him and other class members as they clarify the directions further discussion should take

K. Your class has at last developed into a fairly cohesive unit. The discussions are more animated and everyone participates to some degree. Disagreements on ideas begin to appear and the students give evidence of intense feelings on a number of issues. George has been particularly outspoken. He has very radical ideas that seem to provoke the other students to disagree but you know that the ideas he expresses have some support from some psychologists that you consider to be the "lunatic fringe". George seldom gives in on a point.

45. You would believe that these conditions are likely to:

(a) ultimately strengthen the group

(b) do little but make it uncomfortable until George learns his lesson

(c) destroy the group unity unless you intervene

(d) make it difficult for progress to be made for some students until they learn to accept George

46. With regard to George you would:

(a) refer him to the teacher-counselor

(b) point out to Oeorge that he is intolerant of the views of other class members

(c) encourage him to express his ideas in ways that would not irritate other students

(d) politely but firmly keep him from expressing such ideas

47. With regard to the other students you would:

(a) encourage them in their effort to stand up to George

(b) help them to understand what George is doing to them and why

(c) help them to get onto topics and ideas where George could not disagree with them so forcefully

(d) get into the discussion on their side and show George that he is wrong

48. With regard to your concern for George as a person, you would feel that:

(a) he is developing undemocratic traits by behaving as he does, and you would hope to help him change

(b) he does not understand how to behave in a democratic setting and may need help

(c) he probably has never learned certain social skills necessary for democratic group behavior and the possibilities of developing such skills should be shown him.

(d) he will learn sooner or later that in a democracy some ideas are undesirable because they tend to destroy the group

Answer Sheet

TEACHING SITUATION REACTION TEST

Name ______________________________ Number ____________ Date ____________
(print) Last First

1. a b c d
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48. a b c d

1967

SEMANTIC DIFFERENTIAL INSTRUMENT FOR ESTIMATING ATTITUDES TOWARD ACTIVITIES RELATED TO INSTRUCTION.

The purpose of this instrument is to measure the meanings of certain ideas and activities to teachers and prospective teachers by having them make judgments about some items according to a series of descriptive scales. In filling out this form, please make your judgment on the basis of what these things mean to you and how you feel about them.

In this instrument, you will find fifty or more statements about things teachers do or may do that are related to instruction. You will also find six scales against which to rate each statement.

Here is how you are to use these scales: If you feel that the statement is very closely related to one end of the scale, you should place your check mark as follows:

Pleasing _X_: ___: ___: ___: ___: ___: ___: Annoying
OR
Pleasing ___: ___: ___: ___: ___: ___: _X_: Annoying

If you feel that the statement is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

Meaningless ___: _X_: ___: ___: ___: ___: ___: Meaningful
OR
Meaningless ___: ___: ___: ___: ___: _X_: ___: Meaningful

If the statement seems only slightly related to one side as opposed to the other (but is not really neutral) then you should check as follows:

Important ___: ___: _X_: ___: ___: ___: ___: Trivial
OR
Important ___: ___: ___: ___: _X_: ___: ___: Trivial

The direction toward which you check, of course, depends upon which of the two ends of the scale seem most characteristic of the statement you are judging.

If you consider the statement to be neutral on the scale, both sides of the scale equally associated with the statement, or if the scale is completely irrelevant, unrelated to the statement, then you should place your check-mark in the middle space:

Valuable ___: ___: ___: _X_: ___: ___: ___: Worthless

IMPORTANT: 1) Place your check-marks in the middle of spaces, not on the boundaries.

This: ___: ___: ___: _X_: ___: ___: ___:

Not
This: ___: ___: ___:X ___: ___: ___: ___:

2) Be sure you check every scale for every statement--do not omit any.
3) Never put more than one check-mark on a single scale.

Sometimes you may feel that you have dealt with the same item more than once on this instrument. This will not be the case, so do not look back and forth through the items. Do not try to remember how you checked similar items earlier. Make each item a separate and independent judgment. Work at fairly high speed through this activity. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we want. On the other hand please do not be careless, because we want your true impressions.

REACTION TO INSTRUCTIONAL ACTIVITIES

Following are statements related to instructional activities which teachers may or do engage in. Rate each statement according to your understanding, opinion or belief in relation to each of the scales following the statement:

1. Planning a lesson or series of lessons in detail.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

2. Playing games with children.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

3. Making decisions about the purposes of a lesson.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

4. Checking records to find out about students.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

5. Working with children to diagnose their needs.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

6. Listening to children.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

7. Setting specific goals for children's learning.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

8. Selecting instructional materials.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

9. Making instructional materials.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

10. Giving the same assignment to the entire class.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

11. Working with children in small groups.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

12. Finding different ways to get an idea across.

Pleasing ___:___:___:___:___:___:___: Annoying
Meaningless ___:___:___:___:___:___:___: Meaningful
Important ___:___:___:___:___:___:___: Trivial
Dull ___:___:___:___:___:___:___: Exciting
Hard ___:___:___:___:___:___:___: Easy
Bad Procedure ___:___:___:___:___:___:___: Good Procedure

13. Carrying on a conversation with an individual child.

Pleasing ___:___:___:___:___:___:___: Annoying
Meaningless ___:___:___:___:___:___:___: Meaningful
Important ___:___:___:___:___:___:___: Trivial
Dull ___:___:___:___:___:___:___: Exciting
Hard ___:___:___:___:___:___:___: Easy
Bad Procedure ___:___:___:___:___:___:___: Good Procedure

14. Making evaluation instruments.

Pleasing ___:___:___:___:___:___:___: Annoying
Meaningless ___:___:___:___:___:___:___: Meaningful
Important ___:___:___:___:___:___:___: Trivial
Dull ___:___:___:___:___:___:___: Exciting
Hard ___:___:___:___:___:___:___: Easy
Bad Procedure ___:___:___:___:___:___:___: Good Procedure

15. Administering evaluation instruments.

Pleasing ___:___:___:___:___:___:___: Annoying
Meaningless ___:___:___:___:___:___:___: Meaningful
Important ___:___:___:___:___:___:___: Trivial
Dull ___:___:___:___:___:___:___: Exciting
Hard ___:___:___:___:___:___:___: Easy
Bad Procedure ___:___:___:___:___:___:___: Good Procedure

16. Writing lesson plans.

Pleasing ___:___:___:___:___:___:___: Annoying
Meaningless ___:___:___:___:___:___:___: Meaningful
Important ___:___:___:___:___:___:___: Trivial
Dull ___:___:___:___:___:___:___: Exciting
Hard ___:___:___:___:___:___:___: Easy
Bad Procedure ___:___:___:___:___:___:___: Good Procedure

17. Marking student papers.

Pleasing ___:___:___:___:___:___:___: Annoying
Meaningless ___:___:___:___:___:___:___: Meaningful
Important ___:___:___:___:___:___:___: Trivial
Dull ___:___:___:___:___:___:___: Exciting
Hard ___:___:___:___:___:___:___: Easy
Bad Procedure ___:___:___:___:___:___:___: Good Procedure

18. Talking with childrens' parents.

Pleasing ____:____:____:____:____:____:____: Annoying
Meaningless ____:____:____:____:____:____:____: Meaningful
Important ____:____:____:____:____:____:____: Trivial
Dull ____:____:____:____:____:____:____: Exciting
Hard ____:____:____:____:____:____:____: Easy
Bad Procedure ____:____:____:____:____:____:____: Good Procedure

19. Conducting a full group discussion.

Pleasing ____:____:____:____:____:____:____: Annoying
Meaningless ____:____:____:____:____:____:____: Meaningful
Important ____:____:____:____:____:____:____: Trivial
Dull ____:____:____:____:____:____:____: Exciting
Hard ____:____:____:____:____:____:____: Easy
Bad Procedure ____:____:____:____:____:____:____: Good Procedure

20. Organizing the classroom for different kinds of activities.

Pleasing ____:____:____:____:____:____:____: Annoying
Meaningless ____:____:____:____:____:____:____: Meaningful
Important ____:____:____:____:____:____:____: Trivial
Dull ____:____:____:____:____:____:____: Exciting
Hard ____:____:____:____:____:____:____: Easy
Bad Procedure ____:____:____:____:____:____:____: Good Procedure

21. Demonstrating how to do something.

Pleasing ____:____:____:____:____:____:____: Annoying
Meaningless ____:____:____:____:____:____:____: Meaningful
Important ____:____:____:____:____:____:____: Trivial
Dull ____:____:____:____:____:____:____: Exciting
Hard ____:____:____:____:____:____:____: Easy
Bad Procedure ____:____:____:____:____:____:____: Good Procedure

22. Discussing plans with other teachers.

Pleasing ____:____:____:____:____:____:____: Annoying
Meaningless ____:____:____:____:____:____:____: Meaningful
Important ____:____:____:____:____:____:____: Trivial
Dull ____:____:____:____:____:____:____: Exciting
Hard ____:____:____:____:____:____:____: Easy
Bad Procedure ____:____:____:____:____:____:____: Good Procedure

23. Taking care of classroom management details.
Pleasing ____:____:____:____:____:____:____: Annoying
Meaningless ____:____:____:____:____:____:____: Meaningful
Important ____:____:____:____:____:____:____: Trivial
Dull ____:____:____:____:____:____:____: Exciting
Hard ____:____:____:____:____:____:____: Easy
Bad Procedure ____:____:____:____:____:____:____: Good Procedure

24. Keeping order in the classroom.

Pleasing ___:___:___:___:___:___:___: Annoying
Meaningless ___:___:___:___:___:___:___: Meaningful
Important ___:___:___:___:___:___:___: Trivial
Dull ___:___:___:___:___:___:___: Exciting
Hard ___:___:___:___:___:___:___: Easy
Bad Procedure ___:___:___:___:___:___:___: Good Procedure

25. Keeping records and completing clerical tasks.

Pleasing ___:___:___:___:___:___:___: Annoying
Meaningless ___:___:___:___:___:___:___: Meaningful
Important ___:___:___:___:___:___:___: Trivial
Dull ___:___:___:___:___:___:___: Exciting
Hard ___:___:___:___:___:___:___: Easy
Bad Procedure ___:___:___:___:___:___:___: Good Procedure

26. Using a variety of methods.

Pleasing ___:___:___:___:___:___:___: Annoying
Meaningless ___:___:___:___:___:___:___: Meaningful
Important ___:___:___:___:___:___:___: Trivial
Dull ___:___:___:___:___:___:___: Exciting
Hard ___:___:___:___:___:___:___: Easy
Bad Procedure ___:___:___:___:___:___:___: Good Procedure

27. Developing practice materials for children.

Pleasing ___:___:___:___:___:___:___: Annoying
Meaningless ___:___:___:___:___:___:___: Meaningful
Important ___:___:___:___:___:___:___: Trivial
Dull ___:___:___:___:___:___:___: Exciting
Hard ___:___:___:___:___:___:___: Easy
Bad Procedure ___:___:___:___:___:___:___: Good Procedure

28. Directing practice or drill activities of children.

Pleasing ___:___:___:___:___:___:___: Annoying
Meaningless ___:___:___:___:___:___:___: Meaningful
Important ___:___:___:___:___:___:___: Trivial
Dull ___:___:___:___:___:___:___: Exciting
Hard ___:___:___:___:___:___:___: Easy
Bad Procedure ___:___:___:___:___:___:___: Good Procedure

29. Helping students express their feelings.

Pleasing ___:___:___:___:___:___:___: Annoying
Meaningless ___:___:___:___:___:___:___: Meaningful
Important ___:___:___:___:___:___:___: Trivial
Dull ___:___:___:___:___:___:___: Exciting
Hard ___:___:___:___:___:___:___: Easy
Bad Procedure ___:___:___:___:___:___:___: Good Procedure

30. Helping students clarify their own ideas.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

31. Answering students' questions.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

32. Giving information by means of various media.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

33. Giving children directions about how to do things.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

34. Telling children your opinion about how things should be done.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

35. Telling children your opinion about how things really are.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

36. Telling children your opinion about how things should be.

Pleasing ___ : ___ : ___ : ___ : ___ : ___ : ___ : Annoying
Meaningless ___ : ___ : ___ : ___ : ___ : ___ : ___ : Meaningful
Important ___ : ___ : ___ : ___ : ___ : ___ : ___ : Trivial
Dull ___ : ___ : ___ : ___ : ___ : ___ : ___ : Exciting
Hard ___ : ___ : ___ : ___ : ___ : ___ : ___ : Easy
Bad Procedure ___ : ___ : ___ : ___ : ___ : ___ : ___ : Good Procedure

37. Administering physical punishment to children.

Pleasing ___ : ___ : ___ : ___ : ___ : ___ : ___ : Annoying
Meaningless ___ : ___ : ___ : ___ : ___ : ___ : ___ : Meaningful
Important ___ : ___ : ___ : ___ : ___ : ___ : ___ : Trivial
Dull ___ : ___ : ___ : ___ : ___ : ___ : ___ : Exciting
Hard ___ : ___ : ___ : ___ : ___ : ___ : ___ : Easy
Bad Procedure ___ : ___ : ___ : ___ : ___ : ___ : ___ : Good Procedure

38. Disciplining children with verbal or restrictive punishments.

Pleasing ___ :✓ ___ : ___ : ___ : ___ : ___ : ___ : Annoying
Meaningless ___ : ___ : ___ : ___ : ___ : ___ : ___ : Meaningful
Important ___ : ___ : ___ : ___ : ___ : ___ : ___ : Trivial
Dull ___ : ___ : ___ : ___ : ___ : ___ : ___ : Exciting
Hard ___ : ___ : ___ : ___ : ___ : ___ : ___ : Easy
Bad Procedure ___ : ___ : ___ : ___ : ___ : ___ : ___ : Good Procedure

39. Paying special attention to children one likes.

Pleasing ___ : ___ : ___ : ___ : ___ : ___ : ___ : Annoying
Meaningless ___ : ___ : ___ : _✓_ : ___ : ___ : ___ : Meaningful
Important ___ : ___ : ___ : ___ : ___ : ___ : ___ : Trivial
Dull ___ : ___ : ___ : ___ : ___ : ___ : ___ : Exciting
Hard ___ : ___ : ___ : ___ : ___ : ___ : ___ : Easy
Bad Procedure ___ : ___ : ___ : ___ : ___ : ___ : ___ : Good Procedure

40. Planning work with children.

Pleasing ___ : ___ : ___ : ___ : ___ : ___ : ___ : Annoying
Meaningless ___ : ___ : ___ : ___ : ___ : ___ : ___ : Meaningful
Important ___ : ___ : ___ : ___ : ___ : ___ : ___ : Trivial
Dull ___ : ___ : ___ : ___ : ___ : ___ : ___ : Exciting
Hard ___ : ___ : ___ : ___ : ___ : ___ : ___ : Easy
Bad Procedure ___ : ___ : ___ : ___ : ___ : ___ : ___ : Good Procedure

41. Telling children information that is verifiable.

Pleasing ___ : ___ : ___ : ___ : ___ : ___ : ___ : Annoying
Meaningless ___ : ___ : ___ : ___ : ___ : ___ : ___ : Meaningful
Important ___ : ___ : ___ : ___ : ___ : ___ : ___ : Trivial
Dull ___ : ___ : ___ : ___ : ___ : ___ : ___ : Exciting
Hard ___ : ___ : ___ : ___ : ___ : ___ : ___ : Easy
Bad Procedure ___ : ___ : ___ : ___ : ___ : ___ : ___ : Good Procedure

42. Presenting evidence that verifies a proposition.

Pleasing ____:____:____:____:____:____:____: Annoying
Meaningless ____:____:____:____:____:____:____: Meaningful
Important ____:____:____:____:____:____:____: Trivial
Dull ____:____:____:____:____:____:____: Exciting
Hard ____:____:____:____:____:____:____: Easy
Bad Procedure ____:____:____:____:____:____:____: Good Procedure

43. Answering childrens' questions about how to do things.

Pleasing ____:____:____:____:____:____:____: Annoying
Meaningless ____:____:____:____:____:____:____: Meaningful
Important ____:____:____:____:____:____:____: Trivial
Dull ____:____:____:____:____:____:____: Exciting
Hard ____:____:____:____:____:____:____: Easy
Bad Procedure ____:____:____:____:____:____:____: Good Procedure

44. Asking questions that will reveal what children know or remember.

Pleasing ____:____:____:____:____:____:____: Annoying
Meaningless ____:____:____:____:____:____:____: Meaningful
Important ____:____:____:____:____:____:____: Trivial
Dull ____:____:____:____:____:____:____: Exciting
Hard ____:____:____:____:____:____:____: Easy
Bad Procedure ____:____:____:____:____:____:____: Good Procedure

45. Asking questions that will reveal unusual or creative ideas of children.

Pleasing ____:____:____:____:____:____:____: Annoying
Meaningless ____:____:____:____:____:____:____: Meaningful
Important ____:____:____:____:____:____:____: Trivial
Dull ____:____:____:____:____:____:____: Exciting
Hard ____:____:____:____:____:____:____: Easy
Bad Procedure ____:____:____:____:____:____:____: Good Procedure

46. Asking questions that will reveal childrens' opinions or judgments about things.

Pleasing ____:____:____:____:____:____:____: Annoying
Meaningless ____:____:____:____:____:____:____: Meaningful
Important ____:____:____:____:____:____:____: Trivial
Dull ____:____:____:____:____:____:____: Exciting
Hard ____:____:____:____:____:____:____: Easy
Bad Procedure ____:____:____:____:____:____:____: Good Procedure

47. Openly criticizing the statements, ideas or behavior of children.

Pleasing ____:____:____:____:____:____:____: Annoying
Meaningless ____:____:____:____:____:____:____: Meaningful
Important ____:____:____:____:____:____:____: Trivial
Dull ____:____:____:____:____:____:____: Exciting
Hard ____:____:____:____:____:____:____: Easy
Bad Procedure ____:____:____:____:____:____:____: Good Procedure

48. Correcting or helping to improve a child's statement or idea.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

49. Informing a child that his statement or idea is correct.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

50. Giving personal praise for approved student statements, ideas or behavior.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

Finally, will you please react to a broad concept as contained in a single word:

51. Teaching.

Pleasing ___: ___: ___: ___: ___: ___: ___: Annoying
Meaningless ___: ___: ___: ___: ___: ___: ___: Meaningful
Important ___: ___: ___: ___: ___: ___: ___: Trivial
Dull ___: ___: ___: ___: ___: ___: ___: Exciting
Hard ___: ___: ___: ___: ___: ___: ___: Easy
Bad Procedure ___: ___: ___: ___: ___: ___: ___: Good Procedure

SEMANTIC DIFFERENTIAL INSTRUMENT FOR ESTIMATING ATTITUDES TOWARD ACTIVITIES RELATED TO INSTRUCTION.

The purpose of this instrument is to measure the meanings of certain ideas and activities to teachers and prospective teachers by having them make judgments about some items according to a series of descriptive scales. In filling out this form, please make your judgment on the basis of what these things *mean to you* and *how you feel about them*.

In this instrument, you will find 12 concepts about things teachers do or may do that are related to instruction. You will also find 10 scales against which to rate each statement.

For each item, place an X in the space that best describes your feeling or judgment about the relationship between that item and its position on the scale. The meaning of each space is indicated at the bottom of each page.

For example, if you think of a particular activity as being particularly interesting, you would place your X in the "closely related" or "very closely related" area of the scale. If a scale is "neutral" or completely irrelevant to an item, your X should go in the middle of the scale.

Important:

1. Place your X in the middle of an underlined area, not on the boundary.

2. Be sure you check every scale for every statement--*do not omit any*.

3. Never put more than *one* check-mark on a single scale.

Sometimes you may feel that you have dealt with the same item more than once on this instrument. This will not be the case, so *do not look back and forth* through the items. Do not try to remember how you checked similar items earlier. *Make each item a separate and independent judgment.* Work at fairly high speed through this activity. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

1. planning lessons

Good	_____:_____:_____:_____:_____:_____:_____	Bad
Boring	_____:_____:_____:_____:_____:_____:_____	Interesting
Effective	_____:_____:_____:_____:_____:_____:_____	Ineffective
Worthless	_____:_____:_____:_____:_____:_____:_____	Valuable
Severe	_____:_____:_____:_____:_____:_____:_____	Lenient
Dull	_____:_____:_____:_____:_____:_____:_____	Exciting
Meaningfull	_____:_____:_____:_____:_____:_____:_____	Meaningless
Weak	_____:_____:_____:_____:_____:_____:_____	Strong
Pleasing	_____:_____:_____:_____:_____:_____:_____	Annoying
Unsuccessful	_____:_____:_____:_____:_____:_____:_____	Successful

very closely related
quite closely related
slightly related
neutral
slightly related
quite closely related
very closely related

2. diagnosing student needs

Good ______:______:______:______:______:______:______ Bad

Boring ______:______:______:______:______:______:______ Interesting

Effective ______:______:______:______:______:______:______ Ineffective

Worthless ______:______:______:______:______:______:______ Valuable

Severe ______:______:______:______:______:______:______ Lenient

Dull ______:______:______:______:______:______:______ Exciting

Meaningfull ______:______:______:______:______:______:______ Meaningless

Weak ______:______:______:______:______:______:______ Strong

Pleasing ______:______:______:______:______:______:______ Annoying

Unsuccessful ______:______:______:______:______:______:______ Successful

very closely related
quite closely related
slightly related
neutral
slightly related
quite closely related
very closely related

3. selecting instructional materials

Good _____:_____:_____:_____:_____:_____:_____ Bad

Boring _____:_____:_____:_____:_____:_____:_____ Interesting

Effective _____:_____:_____:_____:_____:_____:_____ Ineffective

Worthless _____:_____:_____:_____:_____:_____:_____ Valuable

Severe _____:_____:_____:_____:_____:_____:_____ Lenient

Dull _____:_____:_____:_____:_____:_____:_____ Exciting

Meaningfull _____:_____:_____:_____:_____:_____:_____ Meaningless

Weak _____:_____:_____:_____:_____:_____:_____ Strong

Pleasing _____:_____:_____:_____:_____:_____:_____ Annoying

Unsuccessful _____:_____:_____:_____:_____:_____:_____ Successful

very closely related
quite closely related
slightly related
neutral
slightly related
quite closely related
very closely related

4. evaluating student performance

	very closely related	quite closely related	slightly related	neutral	slightly related	quite closely related	very closely related	
Good								Bad
Boring								Interesting
Effective								Ineffective
Worthless								Valuable
Severe								Lenient
Dull								Exciting
Meaningfull								Meaningless
Weak								Strong
Pleasing								Annoying
Unsuccessful								Successful

5. managing the classroom

Good								Bad
Boring								Interesting
Effective								Ineffective
Worthless								Valuable
Severe								Lenient
Dull								Exciting
Meaningfull								Meaningless
Weak								Strong
Pleasing								Annoying
Unsuccessful								Successful
	very closely related	quite closely related	slightly related	neutral	slightly related	quite closely related	very closely related	

6. keeping student records

Good _____:_____:_____:_____:_____:_____:_____ Bad

Boring _____:_____:_____:_____:_____:_____:_____ Interesting

Effective _____:_____:_____:_____:_____:_____:_____ Ineffective

Worthless _____:_____:_____:_____:_____:_____:_____ Valuable

Severe _____:_____:_____:_____:_____:_____:_____ Lenient

Dull _____:_____:_____:_____:_____:_____:_____ Exciting

Meaningfull _____:_____:_____:_____:_____:_____:_____ Meaningless

Weak _____:_____:_____:_____:_____:_____:_____ Strong

Pleasing _____:_____:_____:_____:_____:_____:_____ Annoying

Unsuccessful _____:_____:_____:_____:_____:_____:_____ Successful

very closely related
quite closely related
slightly related
neutral
slightly related
quite closely related
very closely related

7. accepting student feelings

Good	____	____	____	____	____	____	____	Bad
Boring	____	____	____	____	____	____	____	Interesting
Effective	____	____	____	____	____	____	____	Ineffective
Worthless	____	____	____	____	____	____	____	Valuable
Severe	____	____	____	____	____	____	____	Lenient
Dull	____	____	____	____	____	____	____	Exciting
Meaningfull	____	____	____	____	____	____	____	Meaningless
Weak	____	____	____	____	____	____	____	Strong
Pleasing	____	____	____	____	____	____	____	Annoying
Unsuccessful	____	____	____	____	____	____	____	Successful
	very closely related	quite closely related	slightly related	neutral	slightly related	quite closely related	very closely related	

8. administering physical punishment

Good _____:_____:_____:_____:_____:_____:_____ Bad

Boring _____:_____:_____:_____:_____:_____:_____ Interesting

Effective _____:_____:_____:_____:_____:_____:_____ Ineffective

Worthless _____:_____:_____:_____:_____:_____:_____ Valuable

Severe _____:_____:_____:_____:_____:_____:_____ Lenient

Dull _____:_____:_____:_____:_____:_____:_____ Exciting

Meaningfull _____:_____:_____:_____:_____:_____:_____ Meaningless

Weak _____:_____:_____:_____:_____:_____:_____ Strong

Pleasing _____:_____:_____:_____:_____:_____:_____ Annoying

Unsuccessful _____:_____:_____:_____:_____:_____:_____ Successful

very closely related
quite closely related
slightly related
neutral
slightly related
quite closely related
very closely related

9. using student ideas

Good								Bad
Boring								Interesting
Effective								Ineffective
Worthless								Valuable
Severe								Lenient
Dull								Exciting
Meaningful								Meaningless
Weak								Strong
Pleasing								Annoying
Unsuccessful								Successful
	very closely related	quite closely related	slightly related	neutral	slightly related	quite closely related	very closely related	

10. giving students information

Good ______:______:______:______:______:______:______ Bad

Boring ______:______:______:______:______:______:______ Interesting

Effective ______:______:______:______:______:______:______ Ineffective

Worthless ______:______:______:______:______:______:______ Valuable

Severe ______:______:______:______:______:______:______ Lenient

Dull ______:______:______:______:______:______:______ Exciting

Meaningfull ______:______:______:______:______:______:______ Meaningless

Weak ______:______:______:______:______:______:______ Strong

Pleasing ______:______:______:______:______:______:______ Annoying

Unsuccessful ______:______:______:______:______:______:______ Successful

very closely related
quite closely related
slightly related
neutral
slightly related
quite closely related
very closely related

11. criticizing student behavior

Good	___	___	___	___	___	___	___	Bad
Boring	___	___	___	___	___	___	___	Interesting
Effective	___	___	___	___	___	___	___	Ineffective
Worthless	___	___	___	___	___	___	___	Valuable
Severe	___	___	___	___	___	___	___	Lenient
Dull	___	___	___	___	___	___	___	Exciting
Meaningfull	___	___	___	___	___	___	___	Meaningless
Weak	___	___	___	___	___	___	___	Strong
Pleasing	___	___	___	___	___	___	___	Annoying
Unsuccessful	___	___	___	___	___	___	___	Successful
	Very closely related	Quite closely related	Slightly related	Neutral	Slightly related	Quite closely related	Very closely related	

12. Teaching

Good ______:______:______:______:______:______:______ Bad

Boring ______:______:______:______:______:______:______ Interesting

Effective ______:______:______:______:______:______:______ Ineffective

Worthless ______:______:______:______:______:______:______ Valuable

Severe ______:______:______:______:______:______:______ Lenient

Dull ______:______:______:______:______:______:______ Exciting

Meaningfull ______:______:______:______:______:______:______ Meaningless

Weak ______:______:______:______:______:______:______ Strong

Pleasing ______:______:______:______:______:______:______ Annoying

Unsuccessful ______:______:______:______:______:______:______ Successful

very closely related
quite closely related
slightly related
neutral
slightly related
quite closely related
very closely related

WORKSHOP ACTIVITIES ASSESSMENT INDEX

The original directions for reacting to the Index asked teachers to assess the potential value of the activities and to predict the frequency of use.

Now that you have worked with your student teacher, will you react to the index by indicating how valuable the activities really were and the actual frequency of use. Use the scales provided, but assess what really happened instead of predictions.

WORKSHOP ASSESSMENT INDEX

Please respond to each item on two bases: (a) The potential usefulness of the ideas, skills, etc., that have been worked with during the workshop in terms of your using these ideas, skills, etc., with your student teacher next fall (b) The probable frequency of use of the ideas, skills, etc., as you see your use of them with your student teacher next fall.

Please respond to each item. Make your response on the response sheet by placing an (X) at the point on each scale that represents your present perception of usefulness and probable frequency of use associated with each item. You may make additional clarifying comments with respect to each item if you wish.

1. Using a video tape recorder to record samples of the student teacher's teaching behavior, and the sitting down with the student teacher in a supervisory conference to view and discuss the lesson.

2. Using a video tape recorder to record samples of the student teacher's teaching behavior, and then allowing the student teacher to view the sample of the lesson without your presence.

3. Taking interaction analysis on a sample of the student teacher's lesson, plotting the data into a matrix (or having the student teacher plot the data into a matrix) and then sitting down with the student teacher in a supervisory conference to analyze the data and discuss the lesson.

4. Taking interaction analysis on a sample of the student teacher's lesson, plotting the data into a matrix (or having the student teacher plot the data into the matrix) and then encourage the student teacher to analyze the data without your presence.

5. Having the student teacher use the matrix as a means of stating instructional intent prior to a lesson, taking interaction analysis on the lesson, plotting the data into a matrix (or having the student teacher plot the data into a matrix) and then sitting down with the student teacher in a supervisory conference to analyze and discuss the congruence or lack of congruence between intended and actual teaching behavior.

6. Having the student teacher use the matrix as a means of stating instructional intent prior to a lesson, plotting the data into a matrix (or having the student teacher plot the data into a matrix) and then encouraging the student teacher to analyze the congruence or lack of congruence between intended and actual teaching behavior without your presence.

7. Helping the student teacher relate instruction strategy models (reception, interpersonal, etc.) to instructional intent and/or instructional behavior without making concrete reference to the interaction analysis matrix.

8. Helping the student teacher relate instructional strategy models (reception, interpersonal, etc.) to instructional intent and/or instructional behavior by making specific reference to regions, cells, and transition patterns in the interaction analysis matrix.

9. Encouraging and assisting the student teacher in using the Gallagher Levels of Thinking Model to help the student teacher become more aware of how her questions, clarifying statements, etc., provoke different levels of thinking in students, and improve her questioning skill.

10. Encouraging and assisting the student teacher in using the Taba Levels Thinking Model to help the student teacher become more aware of how her questions, clarifying statements, etc., provoke different levels of thinking in students, and improve her questioning skill.

11. Encouraging and assisting the student teacher in interpreting instructional and control incidents in the classroom in terms of principles drawn from theories of the teaching-learning process (Field Theory, reinforcement theory, motivation theory, etc.).

12. Using primarily accepting and clarifying behavior rather than judgmental, directive and telling behaviors during supervisory conferences to help the student teacher "see" what occurred during teaching incidents and grow toward becoming a more effective teacher in ways that are congruent with her unique potential teaching talents.

RESPONSE SHEET

WORKSHOP ASSESSMENT INDEX

Follow instructions on the Workshop Assessment Index Form. Use space between items for additional comments if desired.

NAME: ____________________
SCHOOL: ____________________
GRADE: ____________________

1. a)	not very useful		of some use		very useful
b)	Probably never	perhaps once or twice	several times but not always when the equipment is available		as often as the equipment is available
2. a)	not very useful		of some use		very useful
b)	probably never	perhaps once or twice	several times but not always when the equipment is available		as often as the equipment is available
3. a)	not very useful		of some use		very useful
b)	probably never	perhaps once or twice	several times	at least every other week(as soon as the student starts to teach	at least every week (as soon as the student starts to teach

4. a)

not very useful		of some use		very useful

b)

probably never	perhaps once or twice	several times	at least every other week(as soon as the student starts to teach	at least every week (as soon as the student starts to teach)

5. a)

not very useful		of some use		very useful

b)

probably never	perhaps once or twice	several times	at least every other week(as soon as the student teacher starts to teach)	at least once a week (as soon as the student starts to teach)

5. a)

not very useful		of some use		very useful

b)

Probably never	perhaps once or twice	several times	at least every other week(as soon as the student starts to teach)	at least once a week (as soon as the student teacher starts to teach)

7. a)

not very useful		of some use		very useful

b)

probably never	perhaps once or twice	several times	at least every other week	at least once a week

. a)

not very useful		of some use		very useful

b)

probably never	perhaps once or twice	several times	at least every other week	at least once a week

. a)

not very useful		of some use		very useful

b)

probably never	perhaps once or twice	several times	at least every other week	at least once a week

. a)

not very useful		of some use		very useful

b)

probably never	perhaps once or twice	several times times	at least every other week	at least once a week

. a)

not very useful		of some use		very useful

b)

probably never	perhaps once or twice	several times	at least every other week	at least once a week

. a)

not very useful		of some use		very useful

b)

probably never	occasionally	in many but not necessarily in every supervisory conference		in almost every super visory conference

. Additional Comment:

SUPERVISORY ACTIVITIES CHECK LIST

There are many ways of working with student teachers. Every supervisor uses a variety of techniques and activities. We are attempting to get information about the variety that different cooperating teachers use, and their perception of the value of different techniques.

In the current study some teachers were asked to emphasize certain techniques, others were given no special instructions. Will you indicate how you actually worked with your student teacher this past semester by checking the following list.

1. Check YES or NO to indicate your utilization of the particular activity.
2. Place a double check for the FIVE activities you used most frequently.
3. Indicate the VALUE of each utilized activity by marking 1, 2, 3, 4 or 5 in the value column to indicate "of little value" =1, "of very great value" =5.

	YES	NO	VALUE
1. Planning specific lessons with the student teacher prior to her teaching.	____	____	____
2. Requiring the student teacher to present a plan, but not planning with her.	____	____	____
3. Presenting a critique of the lesson as soon as possible after the teaching episode.	____	____	____
4. Praising aspects of the teaching, but avoiding criticism.	____	____	____
5. Evaluating the teaching as you see it, without concern for praise or criticism.	____	____	____
6. Bringing in a third party (specialist, principal, other teacher) to evaluate the teaching.	____	____	____
7. Ask the student teacher to critique her own teaching with little help from you.	____	____	____
8. Giving the student teacher freedom to try what she wants (laissez-faire)	____	____	____

	YES	NO	VALUE
9. Encouraging the student teacher to try new ideas and practices and to develop her own teaching style.	____	____	____
10. Carefully directing the student teacher and controlling her activities as much as possible.	____	____	____
11. Using a videotape recorder to record samples of the student teacher's teaching behavior, and then sitting down with the student teacher in a supervisory conference to view and discuss the lesson.	____	____	____
12. Using a videotape recorder to record samples of the student teacher's teaching behavior, and then allowing the student teacher to view the sample of the lesson without your presence.	____	____	____
13. Taking interaction analysis on a sample of the student teacher's lesson, plotting the data into a matrix (or having the student teacher plot the data into a matrix) and then sitting down with the student teacher in a supervisory conference to analyze the data and discuss the lesson.	____	____	____
14. Taking interaction analysis on a sample of the student teacher's lesson, plotting the data into a matrix (or having the student teacher plot the data into the matrix) and then encourage the student teacher to analyze the data without your presence.	____	____	____
15. Taking interaction analysis data on the student teacher, and discussing it without plotting a matrix.	____	____	____
16. Having the student teacher use the matrix as a means of stating instructional intent prior to a lesson, taking interaction analysis on the lesson, plotting the data into a matrix (or having the student teacher plot the data into a matrix) and then sitting down with the student teacher in a supervisory conference to analyze and discuss the congruence or lack of congruence between intended and actual teaching behavior.	____	____	____

	YES	NO	VALUE
17. Having the student teacher use the matrix as a means of stating instructional intent prior to a lesson, plotting the data into a matrix (or having the student teacher plot the data into a matrix) and then encouraging the student teacher to analyze the congruence or lack of congruence between intended and actual teaching behavior without your presence.	___	___	___
18. Helping the student teacher relate instruction strategy models to instructional intent and/or instructional behavior without making concrete reference to the interaction analysis matrix.	___	___	___
19. Helping the student teacher relate instructional strategy models to instructional intent and/or instructional behavior by making specific reference to regions, cells, and transition patterns in the interaction analysis matrix.	___	___	___
20. Encouraging and assisting the student teacher in using a levels of thinking model to help the student teacher become more aware of how her questions, clarifying statements, etc., provoke different levels of thinking in students, and improve her questioning skill.	___	___	___
21. Encouraging and assisting the student teacher in interpreting instructional and control incidents in the classroom in terms of principles drawn from theories of the teaching-learning process.	___	___	___
22. Using primarily accepting and clarifying behavior rather than judgmental, directive and telling behaviors during supervisory conferences to help the student teacher "see" what occurred during teaching incidents and grow toward becoming a more effective teacher in ways that are congruent with her unique potential teaching talents.	___	___	___

The Minnesota Student Attitude Inventory January 1969

We should like to get as much data as possible for our student teaching research project, including the reaction of children to the student teacher. Hence, we would like you to administer the Minnesota Student Attitude Inventory.

However, we recognize that there are two problems: (1) Some schools do not wish to expose children to this type of instrument, and (2) the instrument may be too difficult for children in Kindergarten and lower grades. Therefore, we must leave the use of this to your discretion. If you decide to administer it, please follow the directions below in order to standardize administration as much as possible.

1. Give children the directions and answer sheet.
2. Read to them or with them the material on the form.
3. Answer any necessary questions.
4. You may either read the inventory items to the students or give the inventory to them to do. This will depend upon your assessment of their ability to handle it with a minimum of help.
5. If you are reading the items to the students, read the item as it is. If further explanation is necessary, you may then reword, paraphrase, or explain. Similarly you may elaborate if individuals need help on item interpretation when they are reading the items.
6. For some classes, it may be better to do no more than twenty items at one time, and then return for a second and third administration. The answer sheet is set up in three columns to facilitate this.
7. Please make it clear to the children that they are to react to the student teacher and the classroom situations that existed while the student teacher was in charge. This is probably best done by referring to the student teacher by name.

MINNESOTA STUDENT ATTITUDE INVENTORY
January 1969

This is not a test because there are no wrong answers. The answer to each question is A MATTER OF OPINION, and your true opinion, whatever it is, IS THE RIGHT ANSWER. You will be asked a lot of questions about how much you like this class, the teacher who has been working with you, and the work you are doing here. All the questions refer to THIS ONE CLASS AND THIS PARTICULAR TEACHER. By giving frank, true answers to show exactly how you feel, you can help us understand the opinions of students.

Your teacher will give you a paper with the questions on it or will read them to you. You will respond by marking an X in a box on your answer sheet.

HERE IS AN EXAMPLE

The statement you are marking might be: I think my homework is very hard. If you agree with this statement or think it is a correct statement, mark an X in the first box, like this

A	D
☒	☐

If you disagree with the statement, or think it is wrong, mark an X in the second box, like this

A	D
☐	☒

DIRECTIONS:

1. Please do NOT write your name on the answer sheet.
2. Do not skip any questions---answer each one carefully.
3. Make sure that the number on the answer sheet matches the question number when you mark your answer.

MINNESOTA STUDENT ATTITUDE INVENTORY

(DO NOT WRITE ON THIS COPY)

1. This teacher asks our opinion in planning work to be done.

2. This teacher keeps order fairly.

3. I get along well with this teacher.

4. I find it easy to talk to this teacher.

5. This teacher never asks trick questions to show how dumb we are.

6. Most of us get pretty bored in this class.

7. This teacher never slaps us or handles us roughly.

8. No one dares talk back to this teacher.

9. This teacher is one of the best I have ever had.

10. I just don't trust this teacher.

11. It is easy to fool this teacher.

12. This teacher makes sure WE understand our work.

13. This teacher often sends boys and girls out of the room as punishment.

14. This teacher really understands boys and girls my age.

15. Our teacher is very good at explaining things clearly.

16. Frankly, we don't pay attention to this teacher.

17. This teacher has lost the respect of the class.

18. Sometimes things "get out of control" in this class.

19. This teacher certainly knows what he (she) is doing.

20. This teacher often "bawls you out" in front of the class.

21. This teacher makes it fun to study things.

22. This teacher has some special favorites or "teacher's pets."

23. Our teacher never gives us extra assignments as punishment.

24. This teacher wants to check our work to make sure we are on the right track.

25. I really like this class.

26. Sometimes I think this teacher doesn't hear what we say.

27. This teacher helps us get the most out of each hour.

28. This teacher is cool and calm.

29. In this class we fool around a lot in spite of the teacher.

30. When I'm in trouble I can count on this teacher to help.

31. This teacher becomes confused easily.

32. This teacher will punish the whole class when he (she) can't find out who did something bad.

33. This teacher thinks clearly.

34. Some of the students are smarter than this teacher.

35. This teacher lets us discuss things in class.

36. It is fun to see how much we can whisper before we get caught.

37. This teacher makes everything seem interesting and important.

38. I wish I could get even with this teacher.

39. This teacher knows a lot.

40. This teacher is quick to see a new idea.

41. This teacher is too bossy.

42. This teacher never gets angry and shouts at us.

43. We often complain just to get out of work.

44. If I could get away with it, I'd sure like to tell this teacher off!

45. This class is noisy and fools around a lot.

46. This is the best teacher I have ever had.

47. You can't walk around in this class without permission.

48. It seems that somebody is always getting punished in this class.

49. I wish I could have this teacher next year.

50. This teacher has lots of fun with us.

51. Sometimes just thinking about this class makes me sick.

52. This teacher makes very careful plans for each day's work.

53. This teacher helps students when they have problems with their work.

54. Frankly, we just don't obey the teacher in this class.

55. This teacher always takes time to find out your side of a difficulty.

56. This teacher never pushes us or shakes us in anger.

57. This teacher punishes me for things I don't do.

58. This teacher likes to hear students' ideas.

59. We behave well in this class even when the teacher is out of the room.

MINNESOTA STUDENT ATTITUDE INVENTORY

ANSWER SHEET

	A	D		A	D		A	D
1.	☐	☐	21.	☐	☐	41.	☐	☐
2.	☐	☐	22.	☐	☐	42.	☐	☐
3.	☐	☐	23.	☐	☐	43.	☐	☐
4.	☐	☐	24.	☐	☐	44.	☐	☐
5.	☐	☐	25.	☐	☐	45.	☐	☐
6.	☐	☐	26.	☐	☐	46.	☐	☐
7.	☐	☐	27.	☐	☐	47.	☐	☐
8.	☐	☐	28.	☐	☐	48.	☐	☐
9.	☐	☐	29.	☐	☐	49.	☐	☐
10.	☐	☐	30.	☐	☐	50.	☐	☐
11.	☐	☐	31.	☐	☐	51.	☐	☐
12.	☐	☐	32.	☐	☐	52.	☐	☐
13.	☐	☐	33.	☐	☐	53.	☐	☐
14.	☐	☐	34.	☐	☐	54.	☐	☐
15.	☐	☐	35.	☐	☐	55.	☐	☐
16.	☐	☐	36.	☐	☐	56.	☐	☐
17.	☐	☐	37.	☐	☐	57.	☐	☐
18.	☐	☐	38.	☐	☐	58.	☐	☐
19.	☐	☐	39.	☐	☐	59.	☐	☐
20.	☐	☐	40.	☐	☐			

The Observational System for Instructional Analysis

	Teacher Behaviors		Student Behaviors	
ubstantive	T1	Substantive clarification	S1	Substantive
	T2	Responds to substantive solicitation	S2	
	T3	Initiates substantive information	S3	
	T4	Solicits substantive response	S4	
ppraisal	T5	Corrective feedback	S5	Appraisal
	T6	Confirmation	S6	
	T7	Acceptance	S7	
	T8	Positive personal judgment	S8	
	T9	Negative personal judgment	S9	
anagerial	T10	Managerial clarification	S10	Managerial
	T11	Responds to managerial solicitation	S11	
	T12	Initiates managerial information	S12	
	T13	Solicits managerial response	S13	
ilence	T14	Silent covert activity	S14	Silence
	T15	Silent overt activity	S15	

Teacher or Student Behavior

X 16 Instructionally non-functional behavior

Y 17 Interaction separation designation

Categories 1-4, and 10-13 may be further categorized as a. closed or b. open.

OBSERVATION SYSTEM FOR INSTRUCTIONAL ANALYSIS

Sept. 1967
Revision

TEACHER BEHAVIOR

1. Clarifies and accepts student feelings and/or gives non-evaluative encouragement.
2. Clarifies and accepts student ideas and questions.
3. Answers student substantive questions.
4. Teacher directed silence (used during information giving by means of chalk board, overhead, etc.).
5. Gives substantive information or opinion.
6. Gives substantive procedural information or answers substantive procedural questions.
7. Asks open questions (divergent, evaluative).
8. Asks closed questions (cognitive memory, convergent)
9. Gives managerial procedural information or answers managerial procedural questions.
10. Criticizes or rejects student ideas, behavior or feelings.
11. Gives corrective feedback for incorrect ideas or behavior.
12. Gives confirmation of correctness of ideas or behavior.
13. Praises student ideas, behavior or feelings and/or gives evaluative encouragement.

STUDENT BEHAVIOR

14. Gives closed substantive verbal response (cognitive memory, convergent).
15. Gives open substantive verbal response (divergent, evaluative).
16. Gives expression of feeling.
17. Asks substantive or substantive procedural questions.
18. Asks managerial procedural questions.
19. Silent overt activity.
20. Silent covert activity.

OTHER

21. Student to student interaction designation.
22. Student followed by student interaction designation.
23. Instructionally non-functional behavior.